RE
1
04
v.12
no.10

LIBRARY
OCT 24 1942
UNIVERSITY OF TORONTO

VOL. XII. NEW SERIES. No. 10.

OCTOBER, 1903.

Biological
& Medical
Serials

THE OPHTHALMIC RECORD

111

EDITED BY

CASEY A. WOOD, M. D., CHICAGO.
EDWARD JACKSON, M. D., DENVER, COLO.
G. C. SAVAGE, M. D., NASHVILLE.
H. V. WÜRDEMANN, M. D., MILWAUKEE.
GEO. E. DE SCHWEINITZ, M. D., PHILADELPHIA.
W. E. HOPKINS, M. D., SAN FRANCISCO.
JOHN E. WEEKS, M. D., NEW YORK.
HAROLD GIFFORD, M. D., OMAHA.
FRANK ALLPORT, M. D., CHICAGO.

T. A. WOODRUFF, M. D.,
EDITORIAL SECRETARY,
103 E. ADAMS STREET, CHICAGO, ILL.

PUBLISHED ON THE FIFTEENTH OF THE MONTH.

SUBSCRIPTION RATES: IN THE UNITED STATES, CANADA, AND MEXICO, $4.00 PER ANNUM, IN ADVANCE. OTHER COUNTRIES OF THE POSTAL UNION, 18 SHILLINGS.

SINGLE COPIES 50 CENTS.

THE OPHTHALMIC RECORD,
THE HIGH BUILDING, CHICAGO, U. S. A.

Entered at the Chicago Post-Office as second-class matter. Rogers & Hall Co., Printers, Chicago.

COLLABORATORS:

FRANCIS VALK, M. D., New York.
A. W. CALHOUN, M. D., Atlanta, Ga.
ALVIN A. HUBBELL, M. D., Buffalo, N. Y.
E. OLIVER BELT, M. D., Washington, D. C.
F. B. EATON, M. D., San Francisco, Cal.
E. C. ELLETT, M. D., Memphis, Tenn.
MELVILLE BLACK, M. D., Denver, Colo.
WM. DUDLEY HALL, M. D., Boston, Mass.
ROBERT L. RANDOLPH, M. D., Baltimore, Md.
JOHN F. FULTON, M. D., St. Paul, Minn.
CLARENCE A. VEASEY, M. D., Philadelphia, Pa
E. A. SHUMWAY, M. D., Philadelphia, Pa.
C. DEVEREUX MARSHALL, F. R. C. S. Eng., London, England.
DR. GEORGE J. BULL, Paris, France.
DR. JAMES W. BARRETT, Melbourne, Australia
BROWN PUSEY, M. D., Chicago.
ALBERT B. HALE, M. D., Chicago.
W. GORDON M. BYERS, M. D., Montreal, Canada.
FRANK C. TODD, M. D., Minneapolis, Minn.

The October number of THE OPHTHALMIC RECORD will contain amongst others an original article by Casey A. Wood, M. D., Lipoma of the Orbital Muscles ; one by J. E. Gleason, M. D., Ideopathic Myositis, involving the Extraocular Muscles ; one by Frank Allport, M. D., a case of Vernal Catarrh, successfully treated with the X-Ray. There will also appear Editorials, Abstracts, Society Reports and Personals, and Items of Interest to the profession.

THE RECORD particularly desires short practical papers on any subject connected with Ophthalmology. These will be published at as early a date as possible. It is understood that, unless otherwise arranged, original articles, when accepted, are contributed to the RECORD exclusively. Illustrative cuts will be made at the expense of the journal, and proofs for correction will be sent to authors when desired. Reprints with covers will be furnished at cost. The RECORD will be issued monthly, and each number will contain about 54 pages of reading matter.

Address all communications relating to Editorial Department to

T. A. WOODRUFF, M. D., Editorial Secretary,
103 E. Adams Street, CHICAGO.

Subscriptions and Advertisements should be sent to the Publisher, the High Building, Chicago, Ill., U. S. A.

TABLE OF CONTENTS.

I. ORIGINAL ARTICLES.

PAGE

I. Tuberculosis of the Conjunctiva, *by* **EDWARD JACKSON, M. D.,** *Denver, Colo.* Illustrated with colored print 417

II. The Systematic Use of Cylinders in Making the Shadow Test, *by* **ALEXANDER DUANE, M. D.,** *New York*..... 420

III. An Uncomplicated Fourth-Nerve Paralysis of Traumatic Origin, *by* **JAMES W. DUNN, B. S., M. D.,** *Cairo, Ill*..... 424

IV. Will Certain Occupations in Time Affect the Cylindrical Curvature of the Eyeball? *by* **PAUL GUILFORD, M. D.,** *Chicago*.. 426

II. TRANSLATION.

I. Yohimbin: A New Local Anesthetic, Translated *by* **DR. CASEY WOOD**..... 428

III. EDITORIAL.

I. Emile Javal's, "Among The Blind" 432

II. A New Operation for Retinal Detachment..... 433

IV. REPORTS OF SOCIETIES.

I. Annual Meeting of the Mexican Ophthalmological Society..... 435

II. British Medical Association, Ophthalmic Section..... 439

III. San Francisco Society Eye, Ear, Nose and Throat Surgeons... 452

V. ABSTRACTS OF RECENT OPHTHALMIC LITERATURE.

I. Paralysis of Accommodation and of the Soft Palate Following Mumps 454

II. The Symptoms Produced by Diseases of the Pons and Medulla, with Special Reference to the Ocular Symptoms..... 454

III. Retraction Movements of the Eye, by Irritation of the Medulla Oblongata 456

IV. True Papillae in the Normal Conjunctiva..... 457

V. Molluscum Contagiosum of the Ocular Conjunctiva..... 457

VI. Experiments upon the Endogenous Nefection of the Eye..... 458

VII. A Stereoscopic Ocular for my "Reflex-free" Ophthalmoscope.... 460

VIII. Value of Iridectomy as Shown by 1,200 Collected Cases..... 460

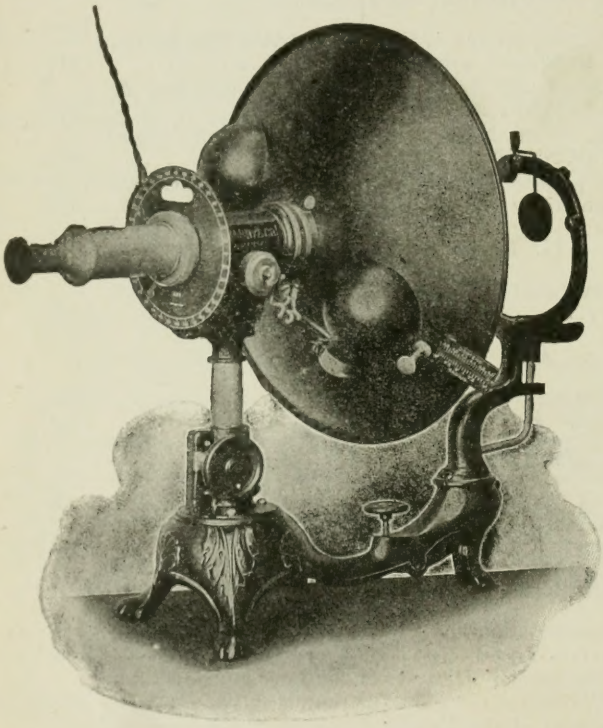
IX. Asthenopia Dependent on Neurasthenia and Hysteria..... 461

VI. NEWS ITEMS.

I. News and Items of Interest 463

The Hardy XX Century Ophthalmometer

WITH DRY CELL BATTERY.



Price, complete with battery, $80.00, less 6 per cent for cash.

Price, wired for city current, $70.00, less 6 per cent for cash.

We have succeeded, after years of experimenting, in getting a dry cell battery that will satisfactorily illuminate our XX Century Ophthalmometer. This makes it possible for those oculists who have felt the need of an Ophthalmometer, but could not have one because they did not have city current, to have one of these invaluable instruments of precision.

Remember, the Ophthalmometer gives you the exact meridians of greatest and least curvature and much valuable information as to the amount of astigmatism. The Hardy XX Century Ophthalmometer is the most accurate instrument on the market and is the only one having stationary mires, stationary prisms, and an attachment enabling the operator to read both meridians at the same time.

WE WILL GLADLY SEND PAMPHLET UPON APPLICATION.

F. A. HARDY & COMPANY,

Wholesale Opticians,

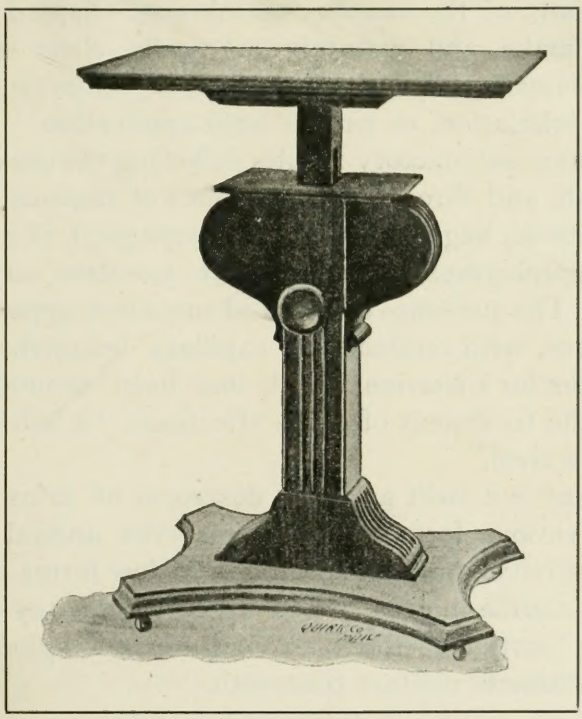
Branch, ATLANTA, GA. **CHICAGO, ILL.** Branch, DENVER, COL.

THE REIMOLD
Ophthalmometer Table

This table is made adjustable by two sash springs, acting as a balance.

It can be adjusted to any position by raising it or lowering it and then clamping it with set screw.

These tables are finished in oak or cherry, presenting a neat appearance as an office furniture.



Patent applied for.

PRICE, $12.50.

Manufactured by

WM. F. REIMOLD,

Manufacturing Optician,

41 North Thirteenth Street, PHILADELPHIA, PA.

LISTERINE

A Non-toxic, Non-irritant, Non-escharotic Antiseptic.

ABSOLUTELY SAFE, AGREEABLE AND CONVENIENT.

LISTERINE is a well-proven antiseptic agent—an antizymotic—especially useful in the management of catarrhal conditions of the mucous membrane, adapted to internal use, and to make and maintain surgically clean—aseptic—all parts of the human body, whether by spray, injection, irrigation, atomization, inhalation, or simple local application.

The same satisfactory results following the use of Listerine in all sub-acute and chronic inflammations of mucous membranes (whether urethral, vaginal, nasal or pharyngeal), is attainded by its judicious employment upon the more sensitive surfaces of the eye and ear. The presence of pus, and succulent appearance of an abraded surface, with tendency to capillary hemorrhage, are certain indications for Listerine, which has been pronounced by an authority in the treatment of these affections, "a balsamic astringent without a rival."

Listerine is a swift and sure destroyer of infusorial life; it prevents the various fermentations, preserves animal tissues and inhibits the activity, growth and motion of low forms of vegetable life: hence Listerine may be relied upon to destroy the activity of the living particles which constitute contagion whenever brought into intimate contact therewith.

An Interesting Little Brochure, Entitled:

"The Treatment of Diseases of the Respiratory System,"

Will be Mailed to Your Address, Upon Application.

LAMBERT PHARMACAL CO., St. Louis, Mo., U. S. A.

Be Assured of Genuine Listerine by Purchasing an Original Package.

Tuberculosis of the Conjunctiva. The upper figure represents the earlier; and the lower figure the later appearances.

BINNER-WELLS CO.

THE
OPHTHALMIC RECORD
A MONTHLY REVIEW OF THE PROGRESS
OF OPHTHALMOLOGY.

VOLUME XII. No. 9. CHICAGO, SEPTEMBER, 1903. NEW SERIES.

ORIGINAL ARTICLES.

TUBERCULOSIS OF THE CONJUNCTIVA.*

BY EDWARD JACKSON, M. D.,
DENVER, COLO.

(Illustrated with colored print.)

The case herewith reported illustrates certain difficulties in the diagnosis of this affection, and the accompanying water color sketches seem worthy of reproduction because there seem to be few good illustrations of the appearances the conjunctiva assumes in this disease. There is a picture by Wurdemann of one of Burnett's cases in the System of Diseases of the Eye, edited by Norris and Oliver, and some by Eyre in the Transactions of the Ophthalmological Society of the United Kingdom, Vol. xvii, p. 8. In the recent work of Ramsey no attempt is made to represent it. The same is true of Haab's Atlas of External Diseases of the Eye. Moreover, the appearances here represented differed materially from those reproduced by Wurdemann and Eyre, and which are more commonly encountered in this condition.

E. L., aged ten years, a girl who had previously enjoyed good health, was brought to me January 2, 1903. Six weeks previously it was noticed that her left cheek was swollen, the swelling extending down the neck. She had fever and vomiting, and was decidedly ill. Two weeks after that, it was noticed that the lids of the left eye were slightly swollen; and two weeks later she was taken to an oculist of large experience, who made the diagnosis of syphilis and placed her upon the use of mecurial inunctions. Meanwhile the vomiting had ceased, the fever had diminished, and her general condition had improved so that she was thought to be in almost her ordinary health. But she had continued to lose weight, and the swelling of the neck, cheek and lids continued about the same.

*Read before the American Ophthalmological Society, May, 1903.

Vision was R. 4/4 mostly, L. 4/4 partly. The right eye was normal in all respects, and has so continued. There was marked swelling of the lower lid of the left eye and slight swelling of the upper. The whole cheek on that side was slightly swollen, and there was a swelling which in location and extent would be well represented by placing the child's hand spread out, with the center of the palm just behind the angle of the jaw. The swelling was composed of enlarged lymphatic glands rounded out by œdema. The separate glands could be readily recognized, although they were comparatively soft.

There was very little pain or soreness either about the eye, or in the swelling at the angle of the jaw. There was no photophobia or excessive lacrymation. The eye-ball was free from hyperemia. The patient was rather anæmic and was losing weight, about two pounds a week. There was no enlargement of lymphatic glands in other parts of the body, and no history or other symptoms pointing to syphilis. The family history was good, except that the mother suffered from scrofulous glands in childhood, and presented extensive scars therefrom upon her neck.

Upon everting the lids the appearances shown in the upper figure were exhibited. In the upper lid there was general hyperemia and slight thickening of the conjunctiva; with numerous points like minute trachoma granules. But the surface was generally smooth. Such appearances might be presented during an acute catarrhal conjunctivitis.

The changes in the lower lid were very striking. The thickening was greater. Toward the margin of the lid there were masses like large trachoma granules and toward the retro-tarsal fold much apparently fatty, necrosed, almost white tissue. The granules when looked at closely, bore some resemblance to miliary tubercules. Each had a gray translucent center with minute vessels entering it from a surrounding vascular zone. Between the granules and on the surface of the white tissue lay a slight, gray sticky discharge. No tubercle bacilli were found in it. One week later this discharge seemed to be less.

January 16 the discharge was again examined, and upon one cover glass two typical tubercle bacilli were found by Dr. W. C. Mitchell, Denver City bacteriologist. After this, bacilli were found repeatedly, but never more than three on one cover glass, and in about half the preparations none at all were discovered. The patient was shown at the meeting of the Colorado Ophthalmological Society.

The appearances presented changed very slowly. February 17 it

is noted, there was less swelling of the lower lid, less white on its conjunctival surface, and the granulations of the tarsal portion were smaller. By March 11 the patient had stopped losing weight, and had gained a little. The swelling of the glands had diminished and the glands were firmer to touch.

April 20. The lower lid is still less swollen. There is much less of the white, necrosed tissue on its inner surface. The granules are smaller and look more like those of trachoma. The upper lid contains a few larger granulations. Both lids continue soft. The lower lid when fully everted presents a distinct ridge formed by pressure into the sulcus between the lid and eye-ball. In two cover glass preparations I found but a single tubercle bacillus. The appearances at this time are shown in the lower figure of the colored plate, and the individual granules are somewhat shrunken, and firmer and decidedly more vascular. The patient has gained but little in weight, but seems in every other way better, although still easily tired and irritable.

The local treatment has been confined to the use of a wash of trikresol 1 to 1500, and iodoform ointment, 25 per cent. The general treatment has been that for tuberculosis, rest, abundant food, outdoor living, cod-liver oil and tonics.

The swelling of the glands was discovered two weeks before it was noticed that anything was wrong with the eye. But the condition of the lids when first examined, and their very slow change while under observation, make it certain that the conjunctival lesions had existed many weeks or, perhaps, months before the swelling of the glands was noticed. It is probable that the conjunctival lesion was primary, but remained unnoticed until the invasion of the lymphatics gave rise to rather acute symptoms.

Of the diagnosis of syphilis in this case, little need be said. The lesions did not resemble syphilitic disease of any kind; and the glandular enlargement was strictly confined to the group immediately connected with the lid.

When first seen there was little reason to mistake the condition for trachoma. But at the present time there is quite a good deal of resemblance to trachoma, and such a mistake would be very likely to be made, if the glandular swelling and general condition were not taken into account. When the case was first seen and the history taken (before the lids were everted) the swelling of the lids, the swelling of the glands and the acute sickness very strongly suggested Parinaud's conjunctivitis. The everted lids presented a picture quite different from that disease. But if they had shown the large

granulation masses, frequently seen in conjunctival tuberculosis, it would have been quite impossible on first seeing the case, to exclude Parinaud's conjunctivitis.

Indeed, since we are still ignorant of the cause and essential character of this last disease, it might be worth while to consider the possibility that it may be a form of tuberculosis of the conjunctiva. Its monocular character, the glandular enlargement, the fever and acute general disturbance, all accord with such a supposition. The uniformly favorable prognosis for Parinaud's conjunctivitis, may be held to negative such an hypothesis. But the prognosis of conjunctival tuberculosis is by no means uniformly unfavorable; and it is quite possible that a particular form of it may usually end in recovery.

THE SYSTEMATIC USE OF CYLINDERS IN MAKING THE SHADOW TEST.

BY ALEXANDER DUANE, M. D.,
NEW YORK.

It is no new idea to use cylinders in making the shadow test. I believe that it is as much as nine years ago since I heard Dr. W. E. Lambert advocating this practice and explaining its utility in connection with his refractometer. But cylinders are not used as much as they should be, and several of our best known treatises on refraction and the shadow test contain little or no reference to their employment; yet I am convinced that their *routine* use is of eminent importance in the diagnosis of astigmatism as enabling us to determine with the utmost precision (a) the amount of astigmatism, (b) the axis of astigmatism, and (c) the exact spherical correction.

What appears to me the best method of applying cylinders in skiascopy can be most readily shown by a concrete example.

Using the concave mirror* at one metre I find a movement against the mirror in all meridians. I add convex glasses. When a convex + 2 D. has been added the reflex becomes quite bright and begins to form a rather distinct band running in the meridian

* I habitually use the concave instead of the plane mirror in skiascopy. While the plane mirror is perhaps easier to apply, and gives a more readily observable reflex, I am convinced that the concave mirror affords more accurate results. This is particularly so in oblique astigmatism, when, as we attempt to move the mirror either in the direction of the band of light or at right angles to it, the cross-shadows, which are so confusing, are with the plane mirror made more conspicuous and more difficult to evade.

of 75° or 80°. I now move my mirror in the direction of this meridian only and keep adding + glasses, until in the meridian of 75° I get the shadow just beginning to move with the mirror. Suppose it takes +2.75 to do this. No. +2.75 then is the reversing glass for the meridian of 75°. I now have a quite sharp band of light running in the direction of this meridian.

Leaving the +2.75 on, I now move the mirror at right angles to the band of light, *i. e.,* in the meridian of 165°, and find that the movement of the shadow is still against the mirror. There being evidently quite a little astigmatism, I take a strong cylinder, say +2.00, and place it with its axis at 75° (*i. e.,* in line with the band of light), and then again moving my mirror in the meridian of 165°, see if reversal of the shadow has yet been secured. If not I replace the +2.00 with stronger cylinders. Finally with a +3.50 cylinder I find that I just succeed in making the shadow go with the mirror in the meridian of 165°.

If this cylinder of +3.50 at 75° truly represents the amount and axis of astigmatism, then I should, with my two reversing glasses (+2.75 spherical ⊃ +3.50 cylinder), get the following:

(a) At one metre there should be a bright circular reflex uniformly illuminating the whole pupil.

(b) The shadow should move with the mirror in all meridians alike and precisely in the same line as the mirror moves, not swerving from the path of the latter; that is, not making any oblique movement.

(c) When I advance to just within one metre the shadow should begin to move against the mirror in all meridians and for all alike at precisely the same distance from the eye.

If my correction of the *astigmatism is wrong in amount, e. g.,* if the cylinder is +3.25 instead of +3.50, then, as I approach the patient from a distance of one metre, I shall at a certain distance from him find that in the meridian of 165° the shadow moves with the mirror, while in the meridian of 75° it still moves against it. When this happens I simply change the strength of the cylinder until reversal takes place at just the same distance from the eye for all meridians alike.

If my *cylinder is at the wrong axis, i. e.,* if it ought to be at 80° instead of 75°, then as I sweep the mirror from side to side or up and down, I will notice that the shadow, instead of traveling along the same line as that in which I am moving my mirror, makes a skew or oblique movement, sliding off, as it were, to one

side or the other. When this happens I shift the axis of my cylinder one way or the other, until this obliquity of movement disappears.

Finally, if my *spherical alone is at fault* then reversal takes place evenly indeed in all meridians, but either too close to the eye or too far from it. I then alter the strength of the spherical accordingly, until reversal takes place at just one metre.

In making the test in this way it is essential for the observer to get into the habit of *constantly varying his distance from the patient*—moving his head slightly backward and forward so as to be sometimes just within a metre's distance from the patient, sometimes just beyond it. I regard this forward-and-back movement of the head as a very important part of the shadow-test, however conducted. In other words, I do not think it sufficient merely to stand at one metre from the patient and determine that at that distance we get reversal with a certain glass. We should, in addition, show by moving our head forward a little that this glass no longer produces reversal when we have got a few inches closer to the patient's eye and have thus passed his far-point. A little practice soon makes one quite expert in doing this. Thus with a patient who is truly hyperopic 2 D, we find when we put a +3 D glass before his eye that as we gradually recede from him the shadow keeps moving against the mirror until we are very nearly a metre off, then for a very short space the movement is indeterminate; and again, just beyond this region the shadow moves clearly with the mirror. The patient's far-point lies in the space of indeterminate movement lying between the point where the shadow begins to move with and the point where it begins to move against the mirror. The closer we can get these points together the more precisely shall we estimate the position of the patient's far-point and hence his refraction. It takes only a little practice to so sharpen our powers of observation as to enable us to say positively that at one point the shadow moves distinctly with the mirror and at a point not four inches off moves distinctly against it. This, when reversal is secured at one metre, means precision in estimating the refraction to within ⅛ D. If, on the other hand, we are content with the mere statement that reversal takes place at one metre, without finding out whether it may not also take place at some little distance inside of this point, we may be in error by a least ¼ D.

I would not speak of this point had I not found so many employing the shadow test who do not avail themselves of this accu-

rate means of fixing the far-point, and who even, indeed, seem to be unaware of the principle underlying it.

While this way of determining astigmatism with the shadow test by cylinders may seem a little more circumstantial than that by the use of sphericals alone, one for one meridian and one for the other, it really takes very little more time and is so greatly superior in point of accuracy that the additional minutes given to it are minutes well spent. Moreover, I usually find that time is saved in the end, for it has been my experience, over and over again, to find that the glass thus shown by skiascopy was the one that the patient upon subjective testing immediately accepted—absolutely no change, either in the strength of the glasses or in the axis of the cylinders, being tolerated. I have thus often been enabled to shorten the subjective testing—always so wearisome to surgeon and patient alike—to the absolute minimum.

I utilize the same test, applied in the same way, as a check in *ascertaining whether the correction found with the trial lenses is probably the best obtainable.* Thus, suppose the glass found is $+2.50 \bigcirc +1.50$ cylinder 90°.

I add +1.00 to this, making it $+3.50 \bigcirc +1.50$ cylinder 90°. This should make the patient myopic 1 D. If he really is so, precise reversal will take place with this glass for all meridians alike at one metre. If, however, the spherical is of the wrong strength, or the cylinder is incorrect in either strength or axis, I shall discover the error in the way just mentioned and can remedy it in a moment. I have thus, in a number of instances, been able to decide as to the proper glasses and particularly as to the proper axis of the cylinder, when the patient's answers were not satisfactory.

This method is readily *demonstrated and practiced on the skiascopic eye-model.* The latter, when used for this purpose, should have an additional slot in front of it for holding the correcting cylinder. If in this case we produce an artificial astigmatism by a cylinder of say —2 D, it is easy to show how, when reversal has been secured in the axis of the astigmatism by means of the proper spherical, a rapid and accurate estimate of the astigmatism can be made by a +2 cylinder placed in the additional front slot. If this cylinder is put at 5° or 10° from the right axis, the skew movement above described can readily be evoked, and if a cylinder greater or less than 2 D is used, the failure to correct the amount of astigmatism can easily be shown by the fact that, as we approach

the eye, we secure reversal in one meridian before we do in the other. It is easy in this way to prove how accurate the test is when thus conducted—to show, for example, that it can detect errors of ¼ D or even ⅛ D in the amount of the astigmatism and also very slight errors in the estimation of the axis.

I am sure that those who have once familiarized themselves with the details of the method just described will not readily return to the old way of estimating the refraction in skiascopy by sphericals alone.

AN UNCOMPLICATED FOURTH-NERVE PARALYSIS OF TRAUMATIC ORIGIN.

BY JAMES W. DUNN, B. S., M. D.,

Oculist St. Mary's Infirmary; Expert Examiner to Pension Bureau, Cairo, Ill.

All the muscles engaged in rotating the eyeball, excepting the rectus externus and the obliquus superior, being innervated by one nerve, the motor oculi, it is a rare thing to find an uncomplicated paralysis of one of these muscles. It is not impossible, though, that such a paralysis should exist, even in the set of muscles supplied by the third nerve, either from disease or traumatism. When this occurs it implies disease of, or injury to, the branch of the nerve supplying that one muscle, and the lesion is, therefore, always situated very peripherally. No basal or central disease or injury can cause such a paralysis. However, paralysis of the rectus externus or obliquus superior can result from disease in, or injury to, the patheticus or abducens, in the trunk of either, or at its nucleus of origin. This, it is evident, can not occur very often in a form uncomplicated by disturbance of other eye muscles, when we consider the proximity of the points of origin of the three nerves mentioned and their almost parallel courses to the sphenoidal fissure, and thence to their different muscles in the orbit. That such cases are very rare is recognized by all oculists, but that they do occur is proven by the following cases taken from Norris & Oliver's "System of Diseases of the Eye," wherein due credit is given each author, and proper references to the places of record are made:

Nieden has recorded a case in which fascicular paralysis of one fourth nerve was the only focal symptom to which a tumor of the pineal gland gave rise.

Eulenberg has on record a case of basal paralysis of the sixth nerve from a stab in the temporal region, this being the only cranial

nerve involved, and the paralysis being due to division of this nerve below the posterior clinoid process.

Leber has reported two cases of paralysis of the fourth nerve from falls on the head, in which the paralysis was the main symptom.

The following case will do very well as a companion one for those reported by Leber. It is unique in that the paralysis of the obliquus superior was the *only* symptom, after the disappearance of the dizziness caused by the accident:

Mr. Ed. H., of this city, fell on the slippery pavement January 14, 1903, striking the back of his head very hard; was unable to get up or to stand alone at first, but, after a few minutes, walked a block to his room, assisted by friends, where he lay down and soon apparently recovered. Two or three hours afterward he noticed something wrong with his vision. It was then night, and he went to sleep thinking he would be all right soon, but noticed next morning he saw double in nearly all directions. The diplopia was in the lower field, and, of course, very annoying as his work was mostly on books. Still thinking the trouble would soon disappear he did not consult anyone till the third morning after the accident, when he came to my office. I diagnosed an uncomplicated paralysis of the right superior obliquus from injury of the right patheticus by concussion. The following figure, somewhat modified, from deSchweinitz and Randall, shows the field of single vision and of diplopia; also the position of the image of each eye at three points in the field of double vision:

Aghd field of binocular single vision normal eyes.

Abcd field of binocular single vision in case.

Bghc field of diplopia in same.

Shaded images belong to right eye.

Other than the above diplopia there were no symptoms, either local or general, save a contusion on back of the head just above the occipital protuberance.

The treatment instituted was iodide of potash and mercury internally, and galvanism. This was soon changed to the iodide alone and faradism applied to the eyeball above and to the nape of the neck. There was no improvement till the end of the fourth week; then gradual improvement till the first of April. The case then continued the same till the afternoon of April 30. The patient was then walking on the river front and suddenly realized that his double vision was gone. Since then he has had no annoyance.

Considering the fact that there was no other disturbance save the paralysis of the fourth nerve there could have been no other lesion but one involving this nerve either in its trunk or at its origin. This, of course, precludes the possibility of fracture at the base of the skull or in the sphenoidal fissure. Leber, in his cases, concludes that the lesion in each was rupture of the trunk of the fourth nerve by concussion. Such, likely, was the nature of the injury in the case here reported.

WILL CERTAIN OCCUPATIONS IN TIME AFFECT THE CYLINDRICAL CURVATURE OF THE EYEBALL?

BY PAUL GUILFORD, M. D.,

Ex-resident Surgeon Wills Eye Hospital, Philadelphia; Associate Oculist St Luke's Hospital, Chicago.

It is well known that in hyperopia the rule of the axis of corneal curvature is about 90 degrees, while in myopia the rule of the axis is about 180 degrees.

A recent order of one of the railroads centering in Chicago that all locomotive engineers over fifty years of age should have their eyes examined, brought under my observation, in association with Dr. Frank Allport, consulting oculist of the railroad, a series of twenty-two of these engineers.

Of these two were myopic, two were myopic in one eye and hypermetropic in the other, and eighteen were hypermetropic. According to the rule we should expect to find the axis of the corneal curvature to be about 90 degrees in the majority of these cases. In eighteen, or 82 per cent, the axis was at or near 180 degrees, in three, or 14 per cent, the axis was at or near 90 degrees, and one had no astigmatism. In three of the myopic eyes the axis was 90 degrees, or against the rule. The average age of these men was 57 years and the average time of service as engineers was twenty-seven years.

Does age tend to change the recognized rule of the axes of corneal curvature?

I have examined the records of one hundred consecutive patients over 50 years of age engaged in general business pursuits and find the following:

In forty-seven the axis of astigmatism was at or near 180 degrees; in forty-seven the axis was at or near 90 degrees; and in six the axis was near 90 degrees in one eye and near 180 degrees

in the other. In these cases the axis was equally divided between 90 degrees and 180 degrees, whereas the engineers showed 82 per cent in favor of the horizontal axis.

Eliminating age as the active factor, are there any conditions peculiar to the life of a locomotive engineer that will explain this preponderance in favor of the horizontal axis?

An engineer is on active duty in his cab for perhaps ten or fifteen hours a day. He sits with head out of the cab window, with eyes half shut, intently looking ahead and receives straight in the face the full strength of the wind. He is constantly on the watch for signals and to see that the track is clear, and sometimes maintains these conditions of intent watchfulness for hours at a time, his half closed eyes being meanwhile constantly subjected to the full force of the wind. Running at the rate of from thirty to sixty miles an hour the force of the wind must be very great, even on a comparatively quiet day, and this must, of course, be greatly increased in the event of strong head winds.

That this force will, in time, affect the corneal curvature of the eyeball is, I believe, not only possible but probable. The orbicularis palpebrarum or sphincter muscle which surrounds the circumference of the orbit and eyelids also bears a part in this shaping of the eyeball. In facing a strong wind one instinctively half closes the lids to protect the eyes from the discomfort of the wind and from the danger of small particles of dust that may be in the air. This contraction of the orbicularis muscle in the effort to narrow the palpebral fissure draws the lids more closely against the eyeball and exerts a force, above and below the horizontal diameter of the globe, that tends to flatten the cornea at these two points without affecting the central exposed portion. This exposed portion, less affected by the combined pressure of the lids and wind, retains more nearly the normal curvature of the eyeball and becomes the axis of corneal curvature.

It would hardly seem probable that this change would take place in a few years, but the engineers examined in this series of cases are over 50 years of age, and have been in active service on an average, twenty-seven years.

That this time is sufficient to change the rule of the axis of corneal curvature is shown by the fact that among these engineers 82 per cent showed their astigmatism to be in the horizontal axis, while among men of the same age in general business pursuits but 47 per cent showed the same axis.

If this is true in the case of locomotive engineers why may it not be true also, to perhaps a lesser extent, in the case of all people engaged in out-of-door occupations, and exposed to the pressure of high winds, such as motormen, farmers, etc.?

TRANSLATION.

YOHIMBIN: A NEW LOCAL ANESTHETIC.*

TRANSLATED BY DR. CASEY WOOD.

Magnani had already published a communication touching the anesthetic action of yohimbin (Spiegel) in No. 35 of the *Clinica Moderna*, 1902, in which he reported that, even as a weak solution, it induced anesthesia of the conjunctiva and cornea when instilled into the conjunctival sac. His attention had been attracted to yohimbin by its property of producing hyperemia in the conjunctiva even when injected subcutaneously at quite a distance from that tissue. The idea occurred to him that this property might be utilized to stimulate the metabolism and promote the processes of nutrition and repair in this part of the eyeball when debilitated from local or general affections. He used at first a 1 to 300 aqueous solution of yohimbin hydrochlorate, but found later that a 1 per cent solution is preferable. He added to the mixture a drop or two of chloroform when he wished to preserve it for any length of time. As he previously announced, one, two or more drops of this solution instilled into the conjunctival sac causes a certain amount of smarting, especially when the solution is fresh, which is most pronounced in the region of the lachrymal caruncle. The smarting rapidly subsides, owing to the fact that the bulbar conjunctiva is anesthetized in a minute to such a degree that reflex closing of the lids can not be induced by touching it. In the course of four more minutes the cornea commences to lose its sensibility also, and by the end of ten minutes from the first instillation the anesthesia is complete and profound. This state persists for half an hour, after which sensibility gradually returns and is normal again by the end of the hour. Accommodation is not influenced by the alkaloid, and the iris merely shows a slight sluggishness in its movements, possibly due to engorgement of the blood in its vessels. There is no regularity as to the shape, size or reactions of the pupil when the eye is under the influence of yohimbin; sometimes there is myosis, sometimes mydriasis. The hyperemia

*C. Magnani. Un nuovo anestetico. *Annali di Ottalmologia*, XXII., No. 5-6, p. 322, 1903.

of the conjunctiva appears in a few minutes, particularly when a fresh solution is used; it is pronounced and lasts for a couple of hours, but, with a solution made several days before using, it develops more slowly and is less intense and less lasting. The addition of chloroform to the solution does not seem to modify the anesthetic action, but may aggravate the first smarting.

These results of Magnani's first experiments with yohimbin were confirmed by later experience, reported at the recent Italian Congress of Ophthalmology. From that date to this he has used yohimbin almost invariably for anesthetizing the conjunctiva. One day it occurred to him that possibly the drug might induce anesthesia when injected subcutaneously. Articles by Loewy, Mendel, Oberwarth, Berger, Eulenberg and Maramaldi proved the non-toxicity of the drug in the form of the hydrochlorate, and this statement was corroborated by experiments on his own person. For example, he injected into his forearm .25 cc. of a 1 per cent solution. In a few seconds he could stick the needle again and again into the slightly swollen region, about a centimeter square, where the injection had been made. No pain was experienced, while the regions around were normally sensitive. Half an hour after the injection he made a deep incision into the skin with a bistoury down to the aponeurosis of the muscles, not experiencing the slightest sensation of pain, and at the end of an hour the lips of the wound were sutured with wire, still without pain. Continued tests showed that the region did not regain its normal sensibility for an hour and three-quarters. The solution had been made the day before.

As it stands, when solutions of yohimbin are a week old or more, the drug loses its anesthetic power, in that the anesthesia does not last so long.

After the writer had applied these tests, he did not hesitate to use the alkaloid in all minor operations on the lids, in which the age and docility of the patient allowed chloroform to be dispensed with. The absence of danger from intoxication, the duration of the anesthesia (allowing long operations to be performed without any suffering by the patient while the tone of the muscles of the part is retained) and the fact that operative procedures can be controlled and guided by voluntary movements which the patient makes in accordance with directions given by the surgeon—these are advantages not possessed by any other anesthetic. Nearly every other anesthetic has its drawbacks. Recently, Schultz published in the *Archiv f. Augenheilkunde* a careful comparative study of the various alkaloids

used for this purpose in ocular therapeutics, cocain, apomorphin, chloral hydrate, benzoltropin, stenocarpin, strophanthin, erythroplein, tropacocain, eucain, holocain, anesin, extract of suprarenal capsule and toad poison.

Speaking of cocain, he laments the drying of the epithelium and the cloudiness of the cornea, which are sometimes noted and which occasionally persist. Symptoms of general intoxication not infrequently follow its subcutaneous injection. Abadie has published a case in which the subconjunctival injection of .04 gm. of cocain in a woman of seventy-one was followed by dizziness, syncope and death. Rogmann has likewise observed a case of intoxication for eight hours after injection of 4 cg. into the eyelid. Mellinger says that the vasoconstriction induced by cocain retards the cicatrization by primary intention of a wound in the cornea. The mydriasis interferes with iridectomy and with operations for cataract; in the former, because it facilitates prolapse of the iris, and in the latter because it renders section of the corneal flap more difficult. In conclusion, Schultze remarks that cocain has many disadvantages and a substitute for it would be very desirable, and that among all the anesthetics he has studied he approves of only tropacocain, eucain and holocain. The latter is more toxic than cocain, while eucain, on the whole, does not offer superior advantages, and tropacocain, therefore, is the only one left, and the anesthesia, with this agent, does not last longer than the twenty minutes. In the same way, Mobilio, in a recent article in the *Archivio di Oftalmologia,* reports comparative studies of dionin, peronin, nirvanin, tropacocain, holocain and coca-suprarenalin. Like every one else, he commends the use of dionin as an analgesic, but, in regard to the anesthetics, he would exclude peronin and nirvanin from ophthalmic practice on account of the intense irritation and marked chemosis which they induce. Referring to tropacocain and holocain, he says that although they do not produce cloudiness or loss of epithelium in the cornea, yet the inconstancy of their action and the smarting which they induce are great drawbacks. In respect to peronin, Guaita also concludes (from his research described in the *Annali di Ottalmologia)* that its use should be restricted to enucleation and exenteration of the eyeball, in which operations the vascular congestion and conjunctival edema, which it induces, are of little moment and rather favor the detachment of the conjunctiva from the eyeball. Comparing these observations with his own experience with yohimbin, Magnani emphasizes the fact that the latter behaves like tropacocain, but the constancy of its action, the long duration of the

anesthesia and the lack of toxicity, are advantages so superior that he thinks they should entitle it to the preference over other anesthetics in many cases. He adds that while his article was in press, Loewy and Mueller published in the *Muenchener Medical Wochenschrift,* No. 15, an article dealing with the value of yohimbin as an anesthetic. Their experiences on animals, applying the yohimbin to the mucosæ, the sciatic and vagus, confirm his experiences with the conjunctiva and the cornea. They announce that it acts like cocain. Salomonsohn has also recently asserted that yohimbin might be applied to advantage in many cases, although he thinks that the hyperemia induced rather detracts from its value. Finally, Haike, in the *Therapie der Gegenwart* for May, recommends it on account of its non-toxicity for the removal of the turbinated bodies, and of granulations and polyps in the auditory canal, in which the anemia and the shriveling caused by the cocain are obstacles to successful operation.

THE
OPHTHALMIC RECORD
A MONTHLY REVIEW OF THE PROGRESS
OF OPHTHALMOLOGY.

VOLUME XII, No. 9. CHICAGO, SEPTEMBER, 1903. NEW SERIES.

EDITORIAL.

EMILE JAVAL'S "AMONG THE BLIND."

We have received, with the compliments of the illustrious author, and read with absorbing interest, Dr. Emile Javal's *Entre Aveugles;* or, Advice to Those Who Have Recently Lost Their Sight. It is an 18mo volume of 208 pages, published by Masson, of Paris, and as the writer tells us in the preface, is intended as much for the family and friends of the recently blind adult as for the unfortunate himself. It need not be said that the peculiar attraction of the work lies in the fact that it is prepared by an ophthalmologist of wide experience who has himself braved the ordeal of comparatively sudden blindness after he had passed middle life. Not only has he given his own experience, but he has conducted an exhaustive enquiry into the observations made and and the methods employed by intelligent blind people the world over. These form the basis of twenty-eight chapters on such subjects as domestic occupations, professional occupations, meals, watches and clocks, walks about town and country, travels, the use of the tricycle tandem, hand writing, relations to external objects, writing machines, the phonograph, alphabets for the blind, correspondence, memory training, use of tobacco, marriage, the health, personal habits and hygiene of the blind, the sixth sense, etc.

We have no space to quote extensively from the work, but a few observations ought not to be passed over. One form of slavery, says Javal, from which the blind person escapes with difficulty, is his absolute dependence upon the assertions of others. If, therefore, he does not possess the entire confidence of those about him life becomes intolerable. Never lie to a blind man, with ever so good intentions, because in the attempt to do him a temporary service you will destroy in him his confidence in you and, consequently, his feeling of security. No statement is more false than that the loss of one sense augments the acuity of others. It is contrary to the law of sensation and to our experience to hope, for example, that a blind person, by mere exercise, will hear a watch tick at a greater distance than he did when he first lost his sight. What really hap-

pens is that he learns to observe with his remaining senses facts that, before he became blind, were of secondary importance.

The adult, becoming blind, should continue his work whenever it is at all possible and should endeavor to conquer the difficulties his blindness puts in his way. In the home life of the blind man the saying of Franklin is singularly appropriate: "A place for everything and everything in its place." To have oneself read to in an audible voice is one of the chief resources of the blind, but how unsatisfactory when compared with one's own reading!

In chapter XIV he describes his "writing board," arranged upon physiologic principles and described in the *Révue Scientifique*, May 21, 1881, vol. 28, p. 649.

It is not a fact that because blind people do not see the smoke arising from the lighted cigar, cigarette or pipe they do not enjoy those consolations granted to normal-sighted devotees of the goddess Nicotina. Think, for example, of the number of persons blind from birth, or of those who have later become blind, who regard the after-dinner cigar as one of the necessities of life.

In the great majority of cases the marriage of blind persons is not contraindicated so far as the fear of transmitting the blindness is concerned.

In an appendix Javal devotes a couple of chapters to suggesting certain improvements in the (letter) characters used by the blind—to facilitate the reading of books especially. It has long seemed to us that there is plenty of room for improvement in this direction, and we feel that Dr. Javal's recommendations will not be made in vain.

His style is simple, unusually clear and singularly free from dogmatism. Not only should this book interest every physician but physiologists and psychologists will surely read with profit the chapters on the "sixth sense" and "the psychology of the blind." Finally, a chapter is devoted to addresses of manufacturers, book sellers, institutions, hotels, associations in Great Britain and on the continent likely to prove useful to blind adults. We would suggest to Dr. Park Lewis, who in 1893 so well translated Maurice de la Sizeranne's "Through Blind Eyes," that the American profession would appreciate a second good work in the same line—a translation of Javal's *Entre Aveugles*. C. A. W.

A NEW OPERATION FOR RETINAL DETACHMENT.

The eye has wonderful ability to withstand injury. We have performed every conceivable operation on the anterior segment, and now Kroenlein's operation of temporary resection of the bony or-

bital margin for the exposure of the posterior segment of the globe has made it possible to attack a portion of the eyeball that has heretofore been inaccessible except when the globe was in extreme rotation. Dr. L. Mueller, of Vienna, according to his article in the *Muchener Med. Wochenschrift,* 1903, No. 23, has taken advantage of Kroenlein's operation for exposing the equatorial region of the eyeball in its primary position. He then performs scleral resection for the cure of retinal detachment. The operation he proposes is impossible if the eye is rotated, because of the muscular tension on the globe causing escape of vitreous, but with the eye in its primary position he finds it possible to remove a large piece of sclera without any loss of vitreous. Mueller has operated upon seven cases, four of which he describes. They were all old cases of retinal detachment, and one was so advanced that secondary degeneration had taken place. It was not expected that vision would be materially improved. In all his cases except the one with secondary degeneration of the retina (stretching and shrinking of the retina), re-attachment took place in a few weeks, and the field of vision improved. He believes that the results obtained are permanent.

His operation is briefly described as follows:

1. Preparatory operation on the temporal orbital edge as described by Kroenlin, only somewhat modified, as it is not necessary to go very deep into the orbit.

2. Exposure of the globe in the equatorial portion by temporarily cutting the external rectus and inferior oblique muscles. The distal ends of the muscles are held with a suture which is laid to one side until the operation on the sclera is completed, when the muscles are reunited.

3. Operation upon the globe. The piece of sclera to be resected is about 8 to 10 mm. wide by 16 to 20 mm. long, and lies between the equator and the external rectus, and converges to a point above and below. The sclera incised comes away from the choroid readily, and as soon as removed several fine, strong sutures are placed through the edges of the scleral walls and are left stretched over the choroid. The choroid is now punctured in the lower angle of the wound in order to allow sufficient subretinal fluid to escape to enable the scleral edges to come together. The choroid then contracts like an inflated rubber balloon from which air has been allowed to escape, and slips smoothly underneath the sclera. The scleral sutures are now tied. The operation is completed by reuniting the severed ocular muscles and closing the external wound by suturing the periostium and skin. Bandage.

MELVILLE BLACK.

REPORTS OF SOCIETIES.

TRANSACTIONS OF THE FIRST ANNUAL MEETING OF THE MEXICAN OPHTHALMOLOGICAL SOCIETY, HELD IN THE CITY OF MEXICO. MARCH 27-31, 1903.

President Licéaga, director of the National School of Medicine, presided.

Chánez, president of the society, *reviewed the history of ophthalmology in Mexico.* In the eighteenth century reclination of cataract was practiced. Munoz early in the nineteenth century, with instruments of his own device, released the lens. Vértiz established the first clinic for eye diseases. Carmona y Valle introduced the ophthalmoscope. Ricardo Vértiz was the first to restrict his practice to the specialty; he founded a clinic and was the first to become in the faculty, professor of ophthalmology. Chánez is his successor at the Ophthalmic Hospital with forty-six beds. In 1893 the local society was founded.

Lopez, Mexico, read his paper on the *history of enucleation and preparation of the stump.* He gave his preference for the insertion of fatty tissue within Tenon's capsule, taken from the patient's gluteal region.

Vélez, Mexico, quotes De Schweinitz statistics and places Mule's operation below Barraquer's (implantation of fatty tissue from the patient's glutcal region).

Uribe-Troncoso, Mexico, in discussion, supported these views.

Gama, Mexico, thought too little attention was of late paid to the earlier operations for preserving the vitreous. He liked the fat implantation, however.

Chánez, Mexico, performed enucleation only for neoplasms. He preferred keratectomy.

Uribe-Troncoso read a paper on *Composition of the Aqueous Humor in Senile Cataract.* In several cases the inorganic (mineral) constituent had risen even to 29.37—organic constituent remained normal. In hypermature cataract the mineral constituent sank. He could not support the Leber theory that albumin was increased in cataract formation. Nor did he agree with Peters' statements that the salt constituent was constantly increased. Uribe thought it varied. He thought it most reasonable that the salts were at first increased.

Alonso, San Luis Potosi, reported a *case of burn to the cornea by caustic potash* O. D., and *traumatic myopia*, O. S. In the latter eye the lens was extracted with visual result of 1/4.

Obarrio, San Salvador, reported an *unusual case of pterygrum* and called attention to the vascular zone at the corneal edge. This must be obliterated by the cautery if the pterygrum is to be prevented from recurring.

Lopez, Mexico, proposed two operations—one for small, the other for large pterygia. The first binds the head and neck of the growth beneath the conjunctiva when the edge is cauterized. The second does not extirpate all the growth but leaves the upper and lower third.

Chacon, Mexico, *Comparative Value of Optometric Scales; the need of unifying them and of adopting the metric system.* He analyzed the scales from Nicati's efforts, pronouncing them somewhat short of the truly scientific. He accepts as an improvement the broken arc of Landolt.

Montano, continuing, said that an arbitrary standard was at times more applicable than a perfectly scientific one. He advised the metric nomenclature and proposed a scale devised by Tambarrel (Mexico). He took an arc of a circle and divided it into decimal parts called gono, decigono, centigono, etc., with a radius of a meter. The centinuligono is taken as the standard of visual acuity at 5 m.

Gonzalez, Leon, disliked letters as test type; he preferred Landolt's arc, black on white chart.

In discussion Ramos, Mexico, said there were two questions, the practical and the scientific; therefore a rigid solution was impossible. Again light conditions varied and the room of the body was not always the same. The new scale proposed was sensible and logical.

Uribe-Troncoso in some ways preferred Snellen's type, while Montono's scale is more scientific and can easily be adopted by ophthalmologists.

Chánez proposed a commission to try to unify test type used.

Pourquié, Torreon, read a paper on the *Examination of Vision in Employes of the Mexican International Railroad.* This embraced (1) visual acuity; (2) refraction; (3) color sense; (4) field of vision; (5) fundus. de Wecker's scale was used. Less than 1/4 V. was rejected and lenses were allowed only to old employes. Stilling's tables and Holmgren's worsteds were used for color sense. Peripheral color sense is important in railway employes. Color blindness re-

jected 2.29 per cent. Of 2,400 examined, 130 were rejected for visual defects; thirty-one for having only one eye. He urged that only those trained to the work (oculists) should conduct the examination.

Uribe-Troncoso stated that this was the first Mexican railroad to examine its employes thus. He preferred in color tests Thompson lanterns. The Mexican Ophthalmological Society should establish rules for these examinations and submit them to the government for its guidance.

Montano proposed the following principles: (1) Employes should have at least one-half normal acuity; (2) lenses should not be worn; (3) color sense should be normal; (4) field of vision normal; (5) an eye doctor should conduct the examination. A committee was appointed to formulate rules.

Velez and Silva, Mexico, read a joint paper on the *Conditions of Antisepsis and Sepsis in Eye Surgery in Mexico,* giving a short history of its development, and recommending the most modern methods for surgical conduct.

Lopez, Mexico, *demonstrated an apparatus for sterilizing solutions by means of acetate of ammonia at a temperature of 60° C.*

Chánez, Mexico, showed new instruments. Enucleation scissors with one long arm to pass below conjunctiva and tendons, thus obviating the use of other instruments.

Uribe-Troncoso showed a *new model for Mires in the Javal ophthalmometer;* and an *artificial eye for skiascopy.* Also preparations of eyes mounted in glycerin jelly.

Ramos, Mexico, read a paper on the *Optical Treatment of Myopia.* In Mexico 4.40 per cent of children of mixed parentage had myopia, only 0.33 per cent of pure Indian race. He would correct all cases up to 9 D. (stationary) by lenses; beyond that he would consider operation. Children tolerate full correction; adults do not. He does not believe in a fixed rule, but thinks incomplete correction more practical.

Abarca, Guadalajara, on the same theme, thinks full correction of importance in children, to prevent advance, and up to 3 D. in any case; beyond that it is contraindicated.

Oliver, Philadelphia (U. S. A.), wished appointed a commission to unify tests under which color examinations are made. At present tints or shades have no uniformity.

Ramos, Mexico, supported Oliver's proposal.

Velez and Grane, Mexico, read a paper of *Subconjunctival Injections of Cyanide of Mercury*, 1.1000 beneath the enucleated eye, for sympathetic ophthalmia. They related cases which seemed to yield good results.

Silva stated that Abadie used injections beneath the conjunction of the sympathizing eye or into the nerve stump of the enucleated eye. Darier ascribed the good effect to mercury.

Velez thought syphilis was not present in his case, and that consequently this was not antisyphilitic treatment.

Alonzo upheld the treatment, as did also Chánez.

Galindo tried injections to save the injured eye, but failed.

Velez did not think the treatment a substitute for enucleation.

Chánez thought a syphilitic base helped the treatment. Irritation was not sympathetic ophthalmia.

Galindo, Hidalgo, gave some *Statistics from Practice*. A majority (of 900 cases) were conjunctival. He praised calomel insufflations in leucomas. Sounds for nasal duct stricture he did not leave permanently.

Uribe-Troncoso recommended simple antiseptic washes for many duct infections; the permanent sound is useful in chronic cases, especially of a noninfected type. Protargol strong is valuable.

Velez liked the olive tipped sounds of de Weber.

Chánez preferred large sounds and antiseptic injections.

Chánez, Alonzo, discussed the *Operative Treatment of Myopia*. Indications, methods, results, personal experiences. Under indications one eye (12 years and upward) visual acuity (below 1/10), myopia (of 14-15 D.,), choroiditis. Cantraindications, tolerance of lenses, no fundus changes, fluid vitreous, great visual weakness, loss of one eye. They prefer the needle with subsequent extraction of lens matter. For secondary cataract they prefer Wecker's scissors. The results are good. Alonso reported nineteen operations.

Galindo had tried tenotomy to check progressive myopia, with some success.

Lopez preferred in children to use discission with a large wound anteriorly.

Uribe-Troncoso said he was the first to practice depression of the lens in high myopia. He thought this operation applicable to children, followed by a firm pressure bandage. Under 16 D. he would not operate. It is not decided whether the operation improves eyes already affected with choroidal lesions.

The following theses were approved for the next annual meeting in 1904:

Etiology and Treatment of Diseases of the Lachrymal Passages.

Purulent Ophthalmia as a Cause of Blindness in Mexico.

Study of the Frontal Sinus with Respect to Surgical Treatment of Sinusitis.

Indications for the Use of Cyclopegics in Determining Errors of Refraction.

Diagnosis and Treatment of Syphilitic Affections of the Eye.

BRITISH MEDICAL ASSOCIATION.

OPHTHALMIC SECTION.

ANNUAL MEETING AT SWANSEA, JULY, 1903.

H. E. Juler, F. R. C. S., president, in the chair.

Notes on Operations for Conical Cornea.—The discussion on this subject was opened by Mr. Stanford Morton, who stated that he proposed to consider the treatment from an operative point only. Those operations chiefly used to produce flattening of the cone were:

1. Cauterization without perforation.
2. Cauterization with perforation.
3. Excision of the apex of the cone.

There are scarcely sufficient data at present to decide in favor of any one method. In order to assist at arriving at some definite conclusion he brought forward in detail the results he had obtained after thirty operations on thirteen patients of which he had notes.

In the large majority of cases the operation done was excision of the apex. The cornea was transfixed with a long, narrow Graefe knife and a small flap cut. It was then picked up with a small pair of forceps and an eliptical piece excised. This was designed to remove a piece 2 by 1 mm. In two cases cauterization by burning concentric zones, as advocated by Sir Anderson Critchett, was done without perforation, and another cautery was done with perforation.

These operations are certainly not devoid of risk and should only be undertaken when optical means fail.

Among the dangers attending excision are: Anterior synechia, iritis and posterior synechia; increased tension; hypopyon.

In cauterization with perforation these risks are the same, and,

though in cauterization without perforation these are minimized, yet in one case increased tension followed, requiring treatment.

It is difficult to specify the indications in favor of one or other operation. If the case were slight, the cautery would probably be indicated, the same also of complications such as posterior synechiae were present.

Excision of the apex and cautery with perforation appear to involve the same amount of risk. The scar, however, with the cautery is generally more extensive than the linear scar following excision. Flattening of the cornea being the object aimed at, is certainly best obtained with perforation. Whether, however, the advantages gained by the extra flattening are more than counterbalanced by the risks incurred, and whether the perforation should be effected by the knife or cautery, are points on which it will be easier to form an opinion when we have at our disposal more statistics giving full details of complete series of cases treated by the various methods.

Mr. Morton read a letter he had received from Sir Anderson Critchett, who said that his experience had led him to advocate his method by cauterizing concentric zones without perforation, because he believed it offered the best prospect of an average good result in the largest number. It was essential that the central spot made with the cautery should be as deep as possible short of perforation. He fully admitted the brilliant results sometimes obtained by good operators by the method of excision.

Mr. Tatham Thompson described a method he had adopted of passing horsehair sutures through the cornea, in order to produce flattening. This, however, he had given up, and now only cauterizes short of perforation. Latterly he had done an iridectomy previous to cauterizing, as he thought it lessened the chances of after complications.

Mr. Richard Williams said that he had been so satisfied with the cautery without perforation that since 1886 he had used this method exclusively. His experience with excision had not been satisfactory. The former operation he thought far less free from risk. He thought, however, that a very large number of these cases did not require operation and could be improved sufficiently by glasses and general treatment.

Mr. Doyne said he was in favor of cauterizing without perforating. He never found difficulty in obtaining sufficient flattening. The scar, in course of time, nearly disappears, and he never experienced any complication.

The president said he had often excised the apex, but, on the whole, he preferred cauterizing and making a small perforation.

Mr. Morton, in reply, urged the necessity of operators publishing series of cases. The publishing of single successful cases was useless, as by such means we should never be able to form a definite conclusion as to the best method of operating.

Extraction of Cataract in Its Capsule.—By Major Smith, M. D., I. M. S.—Major Smith said that the removal of the lens in its capsule was practiced in the early days of extraction in Europe, but it fell into disuse, as it was considered unsafe, although all recognized the value of it if it could be done.

Many surgeons in India practiced it, from Macnamara in the early '70s. Major Smith's experience extended over 8,500 cases, and of these 2,000 were done by the usual method and 6,500 were extracted in their capsules. Of 1,023 cataracts extracted in their capsules there was an escape of vitreous in 6.6 per cent. In 4 per cent the capsule was left behind and 99.4 per cent gave first-class results.

The pupil reaction is the most delicate test as to whether the eye is otherwise sound.

The operation is performed by making an incision at the corneo-scleral junction and at once taking out the speculum. The upper lid is then raised by an assistant with a hook while with his thumb he depresses the lower lid; this controls the orbicularis, which, in nearly all cases, is the cause of vitreous being lost. By pressure on the cornea with another strabismus hook, and by counter pressure with a spoon at the wound, gradually, the lens in its capsule is protruded. If the pressure be not made gradually the capsule may burst and be left behind, though the experienced operator can even then generally remove it. It is of the greatest importance that plenty of time be allowed in extracting the lens, for if it be done quickly some complication is sure to occur.

The visual results of this operation are far ahead of any other method. Iritis followed where the capsule was left behind in about 5 per cent of cases, and four out of the 1,023 were failures. One due to suppuration, one due to hemorrhage, and in another the eye shrunk after an extensive loss of vitreous. Iritis was, he thought, not due to bruising, but to the retention of lens matter and capsule.

By operating in this manner we practically eliminate iritis and "after cataract," and the operation is in every way more desirable.

Mr. Bishop Harman related a case in which he had accidentally removed the lens in its capsule, and the eye did quite well.

Dr. Brailey thought it extremely difficult to know how great pressure the eye would stand.

The president had seen the operation done, but rarely without the loss of vitreous.

Major Smith, in reply, said that experience was the essential thing, and a beginner would be sure to find it difficult at first.

Subconjunctival Injection of Tuberculine from a Diagnostic and Therapeutic Point of View.—By Dr. Darier (Paris).—The patient was a girl, aged 13, who showed no sign of congenital or acquired syphilis, though she had a very tubercular aspect.

One eye had been practically destroyed by repeated attacks of inflammation and the other was beginning to become affected. She was suffering from a sclerosing form of keratitis. The other eye was buphthalmic and leucomatous. Hot applications with atropine and mercurial lanoline were used, without much effect at first, but subsequently injections of cyanide of mercury were well borne and she improved somewhat.

Numerous other drugs were tried, but at last subconjunctival injections of tuberculine T. R. were used. The local reaction was most violent. For eight days the eye was much swollen. When this subsided other injections were made, and in the end the vision of the right eye was 1/15 and that of the left 1/18.

Dr. Darier also read a second paper on the *Treatment of Serious Syphilitic Diseases of the Eye.* He thought that there was no method of applying mercury so efficiently as that of giving intravenous injections of the cyanide. This can with great advantage be injected subconjunctivally. Surgeons are apt to be nervous at the first appearance of general symptoms of the drug, but it is absolutely essential to push it if these more serious complications are to be successfully treated.

Mr. Sydney Stephenson strongly advocated the methods recommended by Dr. Darier.

The discussion of the *Eye Changes in Renal Retinitis* was opened by Mr. Nettleship. He said that, although much is already known about the eye changes in renal disease, information is still needed both from ophthalmologists and physicians upon several points, and the following heads were suggested as furnishing suitable matter for discussion:

1. Does albuminuric retinitis ever occur in primary acute nephritis?

2. Cases of retinitis from lardaceous disease of the kidney and from nephritis due to inflammation of the bladder, ureter, or pelvis of the kidney should be recorded.

3. In the retinitis due to pregnancy it is important to know whether the kidneys were or were not sound before the first pregnancy. It seems that most cases occur between the ages of 30 and 40, after several pregnancies, and several attacks of pregnancy dropsy, and that the prognosis of life is better than in ordinary renal retinitis. These facts support the theory that the kidney disease induced by pregnancy is a peculiar and often recoverable affection. All these cases should be examined for signs of chronic nephritis, as the propriety of inducing premature labor may partly depend upon the diagnosis in this respect.

4. If all cases of renal retinitis (except those due to pregnancy) are counted together without reference to age, there are found to be nearly twice as many males as females, the proportion being about the same as that of chronic nephritis. But when the retinitis occurs early in life, the sex proportions seem, from the scanty material available, to be almost reversed.

5. Recognizing two chief factors in the production of renal retinitis—the state of the blood and the state of the retinal blood vessels—he asked for any cases in which a condition of visible disease of the retinal arteries was present without evidence of kidney disease, and whether such cases had been followed by unequivocal signs of chronic nephritis.

6. Do the characters of the retinitis in different cases justify any inference as to the kind of nephritis (chronic interstitial or chronic parenchymatous) from which the patient is suffering? The whole course of the cases should be carefully watched and two kinds of white opacities are to be distinguished: the soft-edged white, or grayish white, patches in the nerve fiber layer, and the brilliant, intensely white, sharply defined patches composed of confluent dots situated in the deeper layers and often arranged in the familiar radiating pattern around the yellow spot.

7. When retinitis occurs with glycosuria in which albumin is also present, to which of these conditions is it due? Probably many of them are really cases of albuminuric retinitis, though sometimes diabetes only is present.

8. Of the other points requiring elucidation are: The influence of (a) scarlet fever; (b) inherited syphilis in producing the chronic renal disease leading to retinitis; (c) the occurrence of renal retinitis in one eye only; (d) cases in which more than one attack of retinitis have been seen and watched through, with special reference to the changes caused by the first attack, and to the effect of retinal atrophy upon the character of the second attack; (e) when pigment spots are

left by renal retinitis, why are they so often found at the periphery of the fundus; (f) what is the cause of the night blindness occasionally met with in renal retinitis; (g) what causes the appearance of choroiditis in some cases, and, finally, what is the nature of the white, opaque thickening of the coats of arteries and veins in some cases and of the appearance resembling retinitis pigmentosa in others?

Dr. George Carpenter said that, with regard to juvenile retinitis, he had made routine examination of the fundus in cases of nephritis in children for many years. During that time he had come across three examples. Two of the cases occurred in chronic interstitial nephritis and both of them were verified post-mortem. There was a growing opinion that these cases in children were of syphilitic origin. The third case was one of parenchymatous nephritis in a girl of 8 years. There was intense neuroretinitis and the changes were partly oedematous and partly degenerative. There was no evidence of syphilis. He thought that this condition was sometimes also due to syphilis. He though that retinitis was not uncommon in interstitial nephritis in children, but what was uncommon was interstitial nephritis itself.

Mr. Henry Power recorded the case of a clergyman, aged about 30, whose health suddenly failed and his vision became impaired, and on examination retinal hemorrhages were found, and radial spots at the macula. The urine was carefully examined and was found to be normal. Three weeks later the changes were more marked and the vision was worse. The urine was then found to contain much albumin and the patient died a few months later. He had seen hemorrhagic retinitis in a pregnant woman who subsequently recovered.

Mr. Hartridge thought that the cases should be divided into those which were of toxic origin and those in which the changes are entirely due to changes in the blood vessels. The cases that do well may be simply toxic. The character of the white patches are difficult to determine, but those that get well must be due either to exudation or else to loss of transparency. He related a case in a boy who had renal retinitis, and, as he had spyhilitic choroiditis, the kidney disease was probably due to this.

Mr. Silcock asked Mr. Nettleship if he had seen retinal changes in surgical kidney; he himself had never done so, except in cases associated with cardio-vascular lesions. Even in cases of prolonged suppression of urine in calculus anuria he had failed to find retinal changes. He regarded the prognosis as very unfavorable, but he agreed with Mr. Power as to the retinitis of pregnancy.

Dr. Reeve (Toronto) mentioned two cases—one a man, appar-

ently in his prime, who died of Bright's disease within six weeks of the first failure of sight; the other case was a man of middle age in perfect health but with myopic fundus changes. Lateral renal changes were developed and were associated with Bright's disease.

Mr. Nettleship, in reply, said that the greatest care should be exercised when giving a prognosis.

Epithelial Plaques of the Conjunctiva.—Messrs. Lister and Hancock brought forward four cases of rare epithelial tumors of the conjunctiva.

Cases 1 and 2 were in young people under 25. The small growths were of a yellowish color and were situated near the limbus above the cornea. One had been removed, but had recurred at the same situation. The surface was dull and one was marked with furrows which corresponded microscopically with minute papillae. They differed from dermoids in containing neither glands nor hairs, and from zerosis patches by the absence of the frothy appearance; the patients were otherwise healthy and there was no night blindness.

Cases 3 and 4 were in people well over middle life. The growths were of a dead white color, like sodden epithelium. One of them had some small pink spots which corresponded to minute, thin-walled blood vessels; the other had no blood vessels.

Clinically they somewhat resembled epithelioma of the conjunctiva, but differed from it in that they had not the convoluted edge and in color they were too white.

Microscopically all the growths consisted of greatly thickened conjunctival epithelium. None of the cells passed into the connective tissue. The growths corresponded more nearly with callosities of the skin, rather than with warts or corns, and until further information was collected the authors were inclined to give them the more general title of "Epithelial Plaques of the Conjunctiva."

Dr. Karl Grossman described a case of aniridia, in which he observed the effect of eserine on the shape of the lens. He found that both the anterior and posterior surfaces of the lens became bulged and the equatorial diameter of the lens became less.

Mr. Harman thought it unwise to draw general conclusions from a single case that was evidently abnormal.

The Corneal Lesions in Acquired Syphilis.—Mr. Sydney Stephenson said that there were two ways in which acquired syphilis may affect the cornea: (1) As an interstitial, diffuse or parenchymatous keratitis, and (2) as a true keratitis punctata described by Mauthner. The latter must be carefully distinguished from ordinary keratitis punc-

tata. Mauthner's is a primary specific affection of the cornea, and the spots are lying at various depths in its substance. There may or may not be episcleral injection; the condition rapidly develops and equally rapidly disappears. The iris is not involved and Mauthner looks upon it as a gummatous infiltration of the cornea. He describes the case of a man, aged 29, who developed the condition four years after he had contracted syphilis. It disappeared six weeks after he had been under mercurial treatment.

Hutchinson at first stated that interstitial keratitis was never seen in acquired syphilis, but since then numerous cases have been described. Statistics showed that from 1.9 to 10 per cent of all cases of interstitial keratitis are due to acquired syphilis.

The chief characteristics of the disease are that it is usually unilateral, nonulcerative, and patchy, and that it usually quickly responds to treatment.

Mr. Stephenson described two cases he had seen in adults and it should be remembered that extra-genital syphilis is by no means unknown in children. He described a case in which a child aged 12 had the typical patchy keratitis and it was found that when a few months old she had had what was evidently a chancre of the lid, which was followed by the skin eruption, etc., of secondary syphilis.

In cases he had collected the average time in which it had showed itself after primary infection was 10.8 years, the extremes being twenty-three years and three weeks. In the latter case it occurred with the primary lesion but usually it is associated with tertiary manifestations.

Mr. Devereux Marshall mentioned a case that had come under his own observation in which the choroid was first affected, and subsequently keratitis developed.

The Use of Retinal Extract in Atrophic Retinae.—R. W. Doyne said when first led to try this it was with the idea of supplying in excess to the blood a specific food that was especially valuable to the retina. The results have been so marked that it points rather to the presence of some physiological principle such as is analogous to the thyroid gland. Fresh retinæ are the most valuable, but a somewhat complicated preparation is made by Burroughs and Welcome called "Optocine," and this is successful. One drawback to the treatment is the expense, as from six to ten fresh retinæ a day are necessary. The supply is limited and they must be quite fresh.

In the great majority of cases treated the great improvement

noted is so definite that we must conclude it is due to the remedy. It doubtless acts by bringing out a potentiality that may remain in an atrophic retina. In five cases of retinitis pigmentosa in which it had been tried they all showed improvement, but the treatment must be persevered with or they relapse. In four cases of tobacco amblyopia they all showed the most marked improvement. In a case of optic atrophy where the patient had been unable to do more than count fingers for many months, she improved in eight weeks to such an extent that she could read words of J4 and she is able to walk about alone and do shopping.

Another case of atrophy due to tabes also showed marked improvement. Similar improvement was seen in a case of old choroiditis with a damaged and thin retina, the result of myopia. When he first paid attention to this subject he had no idea that anyone else had done the same, but he had since discovered that Louis Dor in 1897 and Lagrange in 1898 had used an extract of vitreous and ciliary body.

Mr. Sydney Stephenson mentioned three other cases in which this treatment had been adopted with excellent results and one was a case of tobacco amblyopia which improved directly, in spite of the continued use of tobacco.

Mr. Nettleship had seen some of Mr. Doyne's cases, but he was not quite convinced of the very marked improvement that was said to have taken place.

Dr. Edridge-Green said that some years ago he had tried to prepare an extract of visual purple, but this had quite failed.

Dr. Darier had previously tried extract of retina, choroid and ciliary body. He injected this subconjunctivally; the patients improved under it, but he got nearly as good results with injections of sodium chloride.

Discussion on the Treatment of Concomitant Convergent Strabismus.—Mr. G. Hartridge opened this discussion and commenced by emphasizing the importance of studying the various factors which helped to produce the condition, and the need of a careful examination in each case. The effect is binocular and is the result of excessive ennervation of the internal recti muscles by the associated act of accommodation. The causes of it are (1) hypermetropia; (2) imperfect development of the fusion faculty; (3) defective visual acuity of one eye; (4) anatomical conditions of the eye.

One or several of these conditions may be present in any one case and a careful examination is essential.

The objects of treatment must be the correction of the deformity and the establishment of binocular vision.

The treatment may be divided into (1) optical, (2) orthoptic or educational, (3) operative.

He described the various educational methods that have been employed and showed some of the instruments used. Optical and orthoptic treatment must be honestly carried out for at least a year before an operation is thought of.

With regard to operations, these are all unscientific, as we can only touch the muscles, whereas the defect is in the innervation, and the defect often tends to diminish toward the age of puberty without apparent reason. Hence eyes that have been operated on early may diverge. Even if the eyes are put straight the operation itself tends frequently to produce deformity that are often, by patients and surgeons alike, ignored.

Tenotomy produces a shrunken caruncle and advancement, a considerable thickening over the advanced muscle.

He then discussed the advantages of the different operations that may be performed and invited discussion on three points:

(1) Should the two eyes ever be operated on at the same time.
(2) When should the operation be undertaken.
(3) What operation gives the best result.

The following paper bearing on the same subject was then read:

Convergent Squint. Methods of Preserving or Restoring the Sight of the Deviating Eye and of Establishing Binocular Vision, by Claud Worth.—Mr. Worth said that having been engaged for several years in investigating the subject of squint, he had made detailed notes of more than 1,800 cases of convergent squint, an account of which had been published in his book "Squint."

In it he proved that congenital amblyopia is very rare and that at the first appearance of a squint the corrected vision of the deviating eye is almost always as good as its fellow. Yet after a time the deviating eye becomes almost blind as the result of long continued suppression of the vision of the eye, and this might all have been prevented.

Whether the sight can be restored depends much upon the length of time this suppression has lasted, and therefore the first thing to do is to preserve the sight of the squinting eye by forcing the child to use it, and to at once correct the refraction. No child is too young for this and many of his patients had worn

glasses before they were three months old and had been cured before they were able to walk.

It was important that the frames should be made with very short sides reaching only to just above the ears, and these should end in loops so that they can be tied on. The bridge should have a broad, flat piece of tortoise shell fitted so as to distribute the pressure on the nose. After the first hour or two the child will wear them as readily as clothes. In order to exercise the deviating eye for near things, atropine should be used to the fixing eye only, every morning. This eye, therefore, can not be used for near objects so the child then gets into the habit of looking at his toys with the deviating eye. If the child is young enough the sight gradually improves and he may then even squint with the atrophinized eye. The drops are then left off and thus the eye is saved from becoming amblyopic.

If central fixation has already been lost an attempt may be made to restore it by continuous occlusion of the fixing eye by a pad; if this succeeds, treatment with the amblyoscope should be practiced.

The most harmful practice is to use atropine for the two eyes, for this effectually prevents the deviating eye from making any attempt at exercising itself.

He had found certain evidence of a desire of binocular vision between five and six months, though probably a certain degree existed before this. Toward the end of the first year a considerable effort will be made in the interest of binocular vision, and binocular vision reaches its full development by the sixth year. After this age fusion training is merely waste of time.

He then described the "amblyoscope" and its method of use. In many cases the desire for fusion brings about a sudden cure of the squint, and no matter what deviation is present, if one can establish a desire for binocular vision, a permanent cure may with confidence be expected.

Mr. Tatham Thompson agreed that the early correction of optical errors was the correct thing to do, yet he had never enforced correcting glasses before two years of age. He relied much on the use of atropine to the fixing eye. He never operated on both eyes at the same time and he thought that tenotomy was justifiable in a certain number of cases. In high degrees advancement with tenotomy of the opposite muscle was necessary.

Mr. Maddox expressed our indebtedness to Mr. Worth for

insisting upon early training. He made some suggestions for simplifying the use of the amblyoscope.

Mr. Harman spoke of the comparatively late development of binocular vision in man.

Dr. Reeve (Toronto) said he should never operate on both eyes at the same time and thought that there was a tendency to try and get too much effect from division or advancement of one muscle. He described several operations.

Mr. Grainger was strongly in favor, when advancing a muscle, of shortening it without cutting away any part of it. He described the method he usually adopted.

Mr. Lister thought that operations that could be done under cocaine were most satisfactory, though by no means so if a general anesthetic were used.

Mr. Hartridge, in reply, said that anesthetics were necessary in children.

Mr. Worth said that in cases in which he had been able to train the fusion sense, he had no hesitation in resorting to operation at any age, because the trained fusion sense could be relied upon to do the fine adjustment; but in cases in which binocular vision was out of the question he never operated until he was able to do so under cocaine.

Mr. Tatham Thompson read a paper on the *Fixation of the Eyeball during Operations in Intractable Patients.* This consisted of passing sutures on both sides of the cornea in the conjunctiva. By making traction on these sutures, the eye could be rotated downward and this caused far less gaping of the wound than when a pair of fixation forceps were used.

Mr. Beaumont described some double forceps he had used with the same object.

Mr. H. C. Ensor described an *operation he had devised and performed for the relief of ptosis.* It consisted of removing a strip of skin below the eyebrow and then cauterizing the subjacent tissues. This caused a scar which, by contracting, raised the lid in a much more efficient manner than is usually obtained by those operations which depend for their action on attaching the lid to the occipitofrontalis muscle.

Preliminary Note on the Pathologly and Diagnosis of Spring Catarrh, by Major Herbert, I. M. S.—In this report he dealt only with spring catarrh as met with in India among the natives. He chiefly wished to draw attention to the remarkable infiltration

of the affected tissues, both ocular and palpebral, with eosinophile leucocytes. By appropriate fixing and staining these special cells can be seen to form a large proportion of the cells which infiltrate the tissues. This infiltration is rare in other parts of the body, occurring only in some cases of pemphigus of the skin.

The presence of eosinophiles in the exudation may be useful as a ready means of diagnosis. There is ordinarily very little exudation in these cases, but it is quickly induced by slight irritation, such as by everting the upper lid for examination. If this be done a thin layer of the exudation can be obtained, and if this be examined eosinophiles are found in great numbers.

In ordinary conjunctival exudation there are hardly any of them present. This fact should be taken into consideration when dealing with the pathology of this somewhat curious affection.

Finally in some of the sections shown stained with polychrome methylene blue, there are intra-cellular bodies which may possibly be parasites. Some of them at least are very different from the hyaline bodies that may be seen in trachoma and other chronic inflammations.

Further Note on the Superficial Punctate Keratitis of Bombay, by Major Herbert, I. M. S.—This affection that he had previously described is most prevalent in the warm weather at the close of the rainy seasons. In October, 1901, there was a severe epidemic and these cases formed one-fourth of the total out-patients attending the hospital. At first there is thickening and injection of the conjunctiva and a trace of ciliary injection. Then the dots on the cornea which stain with fluorescine appear. An encapsuled bacillus is found but the author had not been able to find out much about it and the part it took in the disease.

Modified Mules' Glass Ball for Use After Removal of the Eye, by Adolph Bronner.—Dr. Bronner said that the operation he was in the habit of doing was that of inserting a glass globe into the capsule of Tenon. This, however, not uncommonly came out. He had now devised a glass ball with a hole through the middle. By a somewhat elaborate method of stitches this is held in and it is less liable to come out than formerly with the simple globe.

Knee-Jerk Phenomenon in Patients Suffering from Interstitial Keratitis, by N. Bishop Harman.—It having been stated that in cases of interstitial keratitis the knee-jerks are absent, Mr. Harman examined a large number of children suffering from the disease as well as a large number of healthy individuals who showed

no signs of congenital syphilis. The result was that there was practically no difference in the reflex in the two classes of cases.

Messrs. Doyne and Beaumont had also investigated the subject and they both agreed with Mr. Harman.

An Improved Operation for Congenital Ptosis, by N. Bishop Harman.—The operation described by Mr. Harman was a modification of Mules' operation and instead of using wire he used very fine gold chain. This had many advantages over the wire, chiefly because the tissues would take a greater hold upon it and it would be possible to evert the lid if necessary without running the risk of breaking the wire through bending it. He also described his method of inserting it.

SAN FRANCISCO SOCIETY EYE, EAR, NOSE AND THROAT SURGEONS.

The monthly meeting of the San Francisco Society of Eye, Ear, Nose and Throat Surgeons was held on April 16, 1903. The president, Dr. Louis C. Deane, was in the chair. Dr. Merritt showed a case of *subacetate of lead deposited in the cornea of both eyes.* About five years ago the patient was given a solution of subacetate of lead to drop in his eyes, as they were sore. The result of the treatment was a permanent deposit in the cornea of both eyes which has remained ever since. The epithelium lies over it, leaving the surface smooth.

Dr. Martin: If it is a deposit of lead there are means of getting it out, but if it is an old infiltration, it can not be removed.

Dr. Franklin presented *some new instruments for inspection.* 1, A binocular electric head mirror (Clares) which can be readily focused; 2, Hajeks chisels for the septum; 3, Schulmeister's electric saw handles and saws; 4, A sliding scissors for removal of the turbinates.

The President: The subject for this evening's discussion is the *Evisceration of the Globe.* The subject can be divided into four divisions: First, the indications for the operation; second, the operative technique—and in this there is always something new, as for instance, whether the eye is simply left with a clot of blood in its interior or the advantages of inserting a foreign substance as a gold, silver, silver wire or glass globe, sponge or paraffin. The method of keeping the scleral wound gaping, etc.; third, the after

treatment, and much has been said as to the severe reaction following evisceration; fourth, the final results. Is the foreign substance retained? Is the eye painful? The chances of sympathetic ophthalmia, the cosmetic effects, etc.

Dr. Payne: As regards the indication for the Mules' operation, he speaks from experience of ten or twelve cases in which he has been very much pleased with the result. Of course it is simply the amputation of the anterior segment of the eye at the limbus, evisceration of the sclera and the insertion of the glass ball. It is indicated wherever there is no infection or malignant disease within the globe and may be used in recent penetration injuries where enucleation is done to prevent sympathetic trouble. In old cases, however, he will not resort to it, but up to this time he has used no other material than the vitrified glass ball for insertion into the sclera. The selection of the size of the ball is important. It should fit into the scleral cavity without any tension and still fill the cavity. Slitting the sclera a little at the interior and exterior canthus will allow one to coaptate the edges of the wound the better. As a rule there is a great reaction after the operation. The lids swell, conjunctiva very œdematous and there is considerable pain for several days. Ice applied does not seem to prevent this. He used it in his first two cases, and, although they came out favorably, of course, it was after a great deal of trouble and pain. To prevent this he now makes a wall of cotton over the orbit, filling it in over the lids so as to make a snug compress over the whole orbital opening and then put on a snug flannel bandage. The more evenly this pressure is adjusted the less the reaction, pain and swelling. Occasionally the patient requires a hypo of one-eighth or one-quarter of morphine the first few hours after the operation, but further than this he has had no trouble and the results have been excellent.

Dr. Deane: Dr. Payne's remarks have certainly been interesting and instructive. Would like to ask Dr. Payne if he has had any experience with the injection of paraffin. Could you bring some of your cases to some of our meetings?

Dr. Payne: In answer to the question as to the use of paraffin, he has had no experience with it, but can understand how it might be very satisfactory to fill in the orbital cavity or the space behind the conjunctiva in an ordinary enucleation. The glass ball has been so satisfactory that he hesitates to use any other material; however, he may try the paraffin to fill up the sclera in the near future.

ABSTRACT OF RECENT OPHTHALMIC LITERATURE.

BY E. A. SHUMWAY, M. D.,
PHILADELPHIA.

Paralysis of Accommodation and of the Soft Palate Following Mumps. —Mandonnet (*Ann. d'Oculistique,* February, 1903) reports a case of paralysis of accommodation in both eyes and of the soft palate in a child nine years old, following an attack of mumps, which was accompanied by high fever. The conditions were noticed during the period of convalescence. Careful questioning failed to show any history of diphtheria. One month later (two months after the child's illness) both paralyses had disappeared. Mandonnet was only able to find one other case of paralysis of accommodation after mumps.

The Symptoms Produced by Diseases of the Pons and Medulla, with Special Reference to the Ocular Symptoms.—R. Hirsch (*Zeitschrift f. Augenheilk.*, April, 1903) supplements previous articles by Prof. Bach on the affections of the corpora quadrigemina and cerebellum by a tabulation of the symptoms found in affections of the pons and medulla. He collected eighty cases of pure, mostly unilateral diseases of the pons, and his conclusions are as follows, the symptoms being arranged under two heads—first, general, second, ocular:

1. As direct focal symptoms we have *alternating hemiplegia, affections of the trigeminus, and disturbances of hearing.*

Alternating hemiplegia was present in 75 per cent of all cases; that is, in nearly all the cases in which the pontine lesion had produced any symptoms during life. It appeared in various forms, the most frequent being the type described by Oppenheim; in a small number of cases (10 per cent) the well known Gubbler type was observed.

The *trigeminus* was involved in thirty-five per cent of the cases; in a very few an alternating hemiplegia was present between the trigeminus and the contralateral half of the body; the loss of sensation was in many cases preceded by hyperaesthesia.

In nine cases anaesthesia of the cornea was present, which was later complicated with neuroparalytic keratitis.

Disturbances of hearing (noises and deafness) were observed in 23 per cent. Whether in these cases the lesion in the pons did not extend beyond the accepted boundary line between the pons and the medulla, and involved the *striae acusticae,* was not stated; as,

however, important acoustic centers are found in the pons, and especially the supranuclear fibers, these disturbances of hearing can certainly be regarded as pathognomonic for diseases of the pons.

Dizziness and staggering gait can only be regarded as indirect focal symptoms, caused either by paralysis of the ocular muscles or by pressure on the cerebellum.

2. *Ocular symptoms: Choked disc was found in one-third* of the cases observed. As the pressure symptoms usually appear late and rarely reach a high degree, the optic neuritis is found only in the later stages. These cases were all tumors of the pons; in fifteen cases of hemorrhage into the pons, the eye ground was always normal.

Ocular paralyses. In about three-fourths of the cases, in other words, in nearly all cases which showed symptoms, the *abducens* was involved, as would be expected from the situation of its center in the pons; it is due partly to direct lesions, and partly to the results of pressure. Usually (in 90 per cent) the paralysis was unilateral, when the lesion in the pons was unilateral. In 10 per cent it was bilateral. The paralysis was usually complete. In a few cases there was irritation of the abducens, instead of paralysis, so that the eye was directed to the side affected.

Isolated paralysis of the internal rectus was not observed, but in *71 per cent of the cases of abducens paralysis* there was also a *functional disturbance of the internus,* which was not so complete as that of the externus (paresis, instead of paralysis). In 12 per cent the internus was normal in monocular movements, but would not act in binocular movements. In four cases convergence movements could be executed.

Deviations of the eyes. With the paralysis of the external rectus of one eye and of the internal rectus of the other, there may be an associated irritation of the antagonists, and, as a result, a deviation of both eyes toward the sound side. Deviations of both eyes were found in nearly one-third of the cases. These must be distinguished from the conjugate deviations observed in diseases of the cerebellum, which are usually only temporary, while those in pontine diseases are permanent. *Ptosis* was seen three times, always on the same side as the abducens paralysis. *Nystagmus,* curiously, was noted only three times; how far inexact observations may have been present can not be decided. *Lagophthalmus* was seen once, and total ophthalmoplegia once. In nine cases *keratitis paralytica* occurred, as the result of involvement of the trigeminus.

B. *Diseases of the Medulla.*—Diagnosis of localized, slowly developing affections of the medulla is very difficult. Bernhardt, in fact, says that "It is clear that it is more than questionable whether we will ever be in a position to recognize with certainty slowly developing disturbances, especially tumors, in the medulla oblongata." Hemorrhages usually cause immediate death. The general symptoms caused by tumors and abscesses are manifold, and include *first,* disturbances of the cranial nerves from the eighth to the twelfth, whose nuclei are present in the medulla, *viz.,* deafness, paralysis and atrophy of the soft palate, and of the pharynx, with dysphagia, paralysis of the vocal cords, disturbances of the heart and respiration, and finally paralysis and atrophy of the tongue with dysarthria; *secondly,* they include paralysis and disturbances of sensation of the extremities by involvement of the nerve tracts which pass through the medulla. As Oppenheim says, an exact symptom complex for tumor formation in the medulla can not be stated.

The *ocular symptoms* are likewise uncertain, and not pathognomonic. In thirty-five cases of almost pure disease of the medulla collected by Hirsch, he found *choked disc* in about 30 per cent, about the same as in pontine lesions. *Paralysis* of the *abducens* was observed in 35 per cent of the cases; this, of course, is not a focal symptom of the medulla oblongata, but is to be ascribed to direct or indirect involvement of the abducens nucleus in the pons. *Widely dilated pupil* on both sides was described in 25 per cent of the cases. *Ptosis* and *exophthalmus* were each seen in one case. *Convergent strabismus* (paralytic?) twice.

As to the pupillary inactivity in the cases of mydriasis, the question arises whether it should not be ascribed to the optic neuritis; but examination of the statistics shows that in 15 per cent of the cases with mydriasis, the eye grounds were normal. For the explanation he is inclined to believe in a connection between the pupil reflex and the medulla. Bach and Meyer assume a reflex inhibitory center in the medulla, which is connected indirectly with the optic nerve through a descending path in the fillet, and an ascending path in the posterior longitudinal fibers. For the cases of mydriasis we could assume an irritation of this center, and in the other cases the center must either be intact or entirely destroyed.

Rètraction Movements of the Eye, by Irritation of the Medulla Oblongata.—Hassan Zia (*Zeitschrift f. Augenheilk.*, March, 1903) in experiments on cats has obtained distinct retraction movements of from five to eight mm., by irritation of the corresponding

side of the floor of the fourth ventricle, not far from the middle line, at its lower third. The fourth ventricle was uncovered by trephining beneath the occipital protuberances, and removing the posterior vermiform process of the cerebellum by means of a curette. After several repetitions, spontaneous retraction movements occurred, or could be produced by touching the eyeball lightly. He interprets this movement by the assumption that there are other reflexes controlled by centers in the medulla besides the light reflex of the pupil, which has been demonstrated by Bach and Meyer (at the Heidelberg Congress, 1902). He believes that reflex winking is probably controlled here. Of course as man has no retractor muscle of the eyeball, the result obtained in the cat can not be directly applied to man.

True Papillae in the Normal Conjunctiva.—J. Nakagawa (*Archiv. f. Augenheilk.*, March, 1903) has made a study of the papillæ in the conjunctiva surrounding the cornea. These have already been mentioned by Villard and Greeff and differ from the hypertrophies of the adenoid tissue of the conjunctiva which are present in many inflammatory diseases of that membrane, and which have been falsely termed papillæ. The true papillæ are present to the number of from four to thirteen in man, commencing exactly at the outer border of the limbus, and stretching outward, downward and inward about 2 mm. into the conjunctiva bulbi less far upward. They are true papillæ, resembling those of the skin, which have, as their characteristics, wave-like elevations of the subepithelial tissue, which are compensated for by an unequal thickness of the epithelium over them. He found the same papillæ in the eyes of horses, cattle, sheep and swine, but in the animals they were not so high as in man. An interesting point is that the epithelial processes between papillæ increase in depth in old people, and their inner extremities may be branched. This may explain why this position is a point of predilection for the development of carcinoma. These processes commence to grow rapidly in beginning carcinoma, forcing their way inward, destroying the tissue, and sending outshoots toward the surface.

Molluscum Contagiosum of the Ocular Conjunctiva.—Th. Ballaban (*Archiv. f. Augenheilk.*, April, 1903) describes a growth situated on the ocular conjunctiva, the size of a hazel nut, which extended from the outer commissure nearly to the cornea. The conjunctiva was firmly attached, but the growth itself was movable in the underlying tissue. It was yellowish red in color, had a lobulated

appearance, and was quite elastic. It was readily removed and healing was prompt. The microscopical examination showed that it was a molluscum contagiosum of the conjunctiva, a condition which has not previously been described. Catarrh of the conjunctiva, caused by the presence of molluscum contagiosum on the skin of the eyelids has been described by Steffan, Mütze, Elschnig and Schäfer. Two of Schäfer's cases had corneal involvement. All of these cases proved intractable until the growths were removed. Ballaban's case is the first in which the conjunctiva was the site of the tumor, the usual position being the face, the neck, hands, forearms, genitalia and eyelids.

Experiments upon the Endogenous Infection of the Eye.—Selenkowsky and Woizechowsky (*Archiv. f. Augenheilk.*, April, 1903) have made a series of experiments upon the infection of the eye by means of bacterial infection of the general vascular system, following up similar experiments of Moll, Panas and Selenkowsky. They were directed especially to the determination of the following questions:

1. Whether the penetration of the organisms circulating in the blood into the posterior part of the eye is possible under any circumstances?

2. If this is the case, do they come from the anterior part of the eye, or directly from the blood?

3. In what way do the microbes enter both parts of the eye?

4. Does the apparent absence of any clinical changes, even when the bacteria are found in the anterior chamber, correspond to the absence of all microscopical lesions; and if the latter do occur, what is their nature?

5. Is it possible, by modification of any of the conditions in the experiments, to produce clinical changes in the eye?

6. How does the irritation act not only upon the anterior, but upon the posterior part of the eye?

7. How does the greater or smaller amount of the culture introduced into the blood act, and also the strength or weakness of its virulence?

Cultures of various degrees of virulence and amount were introduced into the general circulation, and the eyes were then irritated. For the anterior segment the irritation was produced either by cauterization of the limbus corneæ, by the introduction of a piece of steel into the anterior chamber, without injuring the iris, or by producing an artificial prolapse of the iris. For the pos-

terior part of the eye the irritation was produced by the introduction of a foreign body into the vitreous. The following conclusions were reached corresponding to the seven questions above:

1. It *is* possible, experimentally, to cause the penetration of bacteria circulating in the blood into the posterior part of the eye, or rather into the vitreous.

2. The organisms do not enter the vitreous from the anterior segment of the eye, but through the corresponding vessels of the posterior part.

3. The organisms reach the *aqueous humor* exclusively through the *ciliary vessels,* and the *vitreous humor* through the vessels of the *retina and choroid.* The iris, anteriorly, and the lymph spaces of the optic nerve posteriorly, have apparently no role in this respect, although it is often possible for the organisms to reach the eye simultaneously through the lymph spaces of the nerve *per continuitatem.*

4. In spite of the absence of all inflammatory appearances, in the majority of the cases in which the bacteria enter the eye, there is always a microscopically demonstrable phenomenon, namely phagocytosis, which is for the purpose of weakening or destroying the bacteria.

5. Under certain favorable conditions violent inflammatory phenomena can be experimentally produced in the eye by endogenous infection.

6. With a weak, or moderately severe, general infection bacteria enter the vitreous only when the eye has been irritated a short time prviously; in this respect irritation of both parts of the eye is the most favorable condition; then follow irritation of the posterior part, and finally that of the anterior part.

7. In severe general infection the organisms may enter the vitreous of the normal, non-irritated eye. The question as to the way in which irritation of the eyeball influences the entrance of organisms into it has never been shown experimentally, but reasoning from experiments made by Hofbauer and Czylarz and others upon infections after nerve injuries elsewhere, it is probable that a chief factor is the hyperæmia produced. In addition to this the direct irritation of the sensory nerves probably produces trophic disturbances of the vessel walls and a weakening of the resisting power of their endothelial cells. The posterior part of the eye offers a better field for the development of organisms but a less favorable

chance for their penetration, and the organisms may enter despite the absence of embolic or thrombotic processes in the vessels. Why the organisms so rarely produce inflammatory symptoms within the eye is probably due to the few number which enter (in the majority of cases), to their rapid removal through the lymphatic current from the aqueous, and to the vigorous phagocytosis in both parts of the eyes.

Therefore *all general and local processes in the organism which lead to a weakening of the tissue and of the cells, e. g.,* previous illness; *all local diseases which interfere with the lymph circulation of the eye, all external and internal irritations of the eye,* as traumatism, operations, over use of the accommodation in anomalies of refraction; *all physiological and pathological conditions by which hyperaemia of the eye is produced, e. g.,* pregnancy, diseases of the heart, liver, kidneys, etc.; *everything that weakens or destroys the normal functions of the ocular nerves, especially of the trigeminus, and cervical sympathetic; all these conditions may lead to endogenous infection of the eye in the presence of a general or local infection of the body.*

The important practical conclusion to be drawn from these experiments is the necessity of observing the two following prophylactic rules:

1. *A thorough investigation of the general condition should be made before any operation on the eye;* and

2. *The eyes should have complete rest in every infectious disease, even of the mildest character.*

A Stereoscopic Ocular for my "Reflex-free" Ophthalmoscope.—W. Thorner (*Archiv f. Augenheilk.,* April, 1903) has constructed an eye piece which can be attached to the tube of his large ophthalmoscope, by means of which a stereoscopic view of the fundus is obtained. This arrangement is much cheaper than the "stereoscopic ophthalmoscope" which he previously described (in *Schweigger's Festschrift*), and is much more easily focussed.

Value of Iridectomy as Shown by 1,200 Collected Cases.—O. Hallauer (*Archiv f. Augenheilk.,* April and June, 1903) has collected 1,200 cases of iridectomy from the university clinic in Basel, and has tabulated the results so far as vision was concerned as follows:

CATEGORY	Leucoma simplex	Leucoma adhaerens	Seculsion of pupil	Kerato-iritis	Zonular cataract	Secondary central cataract	Chronic iritis	Irido-cyclitis	Irido-choroiditis	Acute glaucoma	Chronic glaucoma	Simple glaucoma	Partial staphyloma of cornea	Seclusion and occlusion of pupil with secondary glaucoma
Central vision	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Improvement.....	85	81	65	72	87	89	68	62.5	64	69.5	35	18	82	50
Preservation..	12	17	27	28	13	11	32	29.	28	12	26	28	14	29
Decrease.....	3	2	8	..	..	..	..	8.5	8	18	39	54	4	21

Asthenopia Dependent on Neurasthenia and Hysteria.—Dr. H. Gradle, Chicago (*Archives of Ophthalmology*, July, 1903) analyzes the clinical conditions which determine the severity and extent of asthenopic symptoms. Low and even medium grades of hyperopia and astigmatism may not cause any annoyance in healthy, vigorous persons, until the power of accommodation fails relatively on account of the normal decline of the range of accommodation with advance in years. Such persons complain merely of premature presbyopia, viz., blurring in close work and a tired feeling far in advance of the normal presbyopic time of life. This condition may be called normal asthenopia.

But most of the patients seen by the oculist suffer much more than this in consequence of optic defects. The feeling of fatigue turns into pain and may extend beyond the eyes, and headaches, dizziness and other symptoms are not uncommon. The exaggeration of asthenopia dependent on optic defects can generally be traced clinically to a variety of conditions lowering the vigor of the nervous system.

The most frequent of these is anæmia. Equally important is a neurotic tendency, either inherited or acquired in consequence of some enfeebling disease (influenza or measles, for instance), unhealthy surroundings, close confinement and want of outdoor exercise or other debilitating influences. Whenever the anæmia or other debilitated condition can be cured, the exaggerated form of asthenopia changes to the moderate asthenopic complaints corresponding to the existing optic error. Gradle insists, therefore, that the patient's general health and his mode of living should receive attention, besides prescribing glasses really indicated. He deplores

the tendency to order weak glasses in every instance of deviation from the ametropic type of eye. He points out, too, that even in perfect emmetropia intense asthenopic distress may be observed as the consequence of pronounced anæmia or intestinal derangement (auto-intoxication).

The clinical picture of asthenopia is often complicated by psychic influence, especially in emotional or hysterical people. Anxiety regarding the eyes may intensify the complaints produced by optic errors or prolong them after proper correction by glasses. In some patients neuralgic pains and the discomfort commonly caused by optic defects are wholly maintained by psychic influence after having been started by some irrelevant traumatism or some transient inflammation. The hysterical nature of these forms of asthenopia can be suspected after local and systemic causes have been excluded by detailed examination. The only absolute proof, however, is the possibility to remove the distress by mental influences or suggestive therapeutics. While many satisfactory results can be obtained in this manner, there are some hysterical subjects whose complaints prove very rebellious.

NOTES AND NEWS.

ITEMS FOR THIS DEPARTMENT SHOULD BE SENT TO
DR. BROWN PUSEY, 31 WASHINGTON ST., CHICAGO.

Dr. H. Moulton, Ft. Smith, Ark., is in Europe for the summer.

Dr. E. C. Ellett, of Memphis, Tenn., is spending several months in England and France.

The Heidelberg Ophthalmological Society will convene the 14th, 15th and 16th of September.

Dr. Louis A. Prefontaine has been appointed oculist to the Springfield (Mass.) Hospital.

Dr. G. E. de Schweinitz has moved his residence and offices to 1705 Walnut street, Philadelphia.

The third edition of Dr. Charles H. May's Manual of the Diseases of the Eye has just appeared.

A Spanish-American Ophthalmological Society to meet annually at Madrid has been formed under the guidance of Dr. Menacho.

Dr. Beverly Randolph Kennon, of Norfolk, Va., and Dr. John P. Davidson, of Richmond, Va., are in Europe for the summer.

Dr. E. A. Spilsbury has been appointed surgeon to the eye, ear, nose and throat department of St. Joseph's Hospital, Yonkers, N. Y.

On the 13th of last May the first annual meeting of the Vienna Ophthalmological Society took place, with Prof. Schnabel as president.

Drs. E. C. Ellett and P. M. Farrington have established a private hospital in Memphis, Tenn., for the treatment of diseases of the eye, ear, nose and throat.

The French Society of Ophthalmology has chosen, "Visual Acu-

ity from the Standpoint of Accident Insurance," as the subject for its meeting of 1904.

Dr. Wm. E. Shackelton has been appointed ophthalmologist to the Mount Sinai Hospital of Cleveland. This is a new hospital, which has been established by Jewish citizens of that city.

The department of education of the state of Texas has adopted the resolutions of the American Medical Association concerning the eye and ear examination of school children, and will proceed to put it in operation in that state.

The New York board of health will shortly open at the corner of One Hundred and Eighteenth street and Pleasant avenue a new hospital for the treatment of trachoma. It is proposed to establish similar hospitals in the Bronx and Brooklyn.

Incident to our horrible method of celebrating the nation's birthday, according to reports collected by the *Journal of the American Medical Association,* on the last Fourth of July ten persons were made totally blind and ninety-five eyes were lost.

The Montana state board of health has adopted the resolutions of the American Medical Association concerning the eyes and ears of school children and will immediately commence operation of the same after the plan inaugurated by the Illinois state board of health.

The San Francisco board of education has adopted the resolutions concerning the testing of school children's eyes and ears adopted by the American Medical Association at its last meeting, and will this fall commence the examination of school children's eyes and ears throughout the city.

Mr. Henry Phipps, donor of $1,000,000 for the cure of tuberculosis in Philadelphia, and of magnificent conservatories to the Pittsburg and Allegheny parks, and the founder of a free manual training school and playground in Allegheny, signalized a public exhibition of the pupils' work by the announcement that all children in the school would have their eyes examined free of charge, and

that those needing special glasses would be provided with them.—*American Medicine,* July 11, 1903.

To Test Eyes.—Henry Phipps, Jr., has sent $350 to the First Ward Manual Training School, Allegheny, with a suggestion that the money used in the examination of the eyes of the school children. He will add to his contribution a sufficient amount to secure treatment and the procuring of glasses for those who are found to need them.—*Jour. A. M. A.*

The Vienna letter to the *Medical News* of August 29 says: "There are between two and three thousand cases of trachoma in the Austro-Hungarian army. This vast number of cases induced the energetic interference of the minister of war. He requested the army medical staff to plan a method to obstruct the propagation of this terrible disease. Here is one of the methods: To concentrate the afflicted persons to one place and to watch that no new trachomatous patient be allowed to enter military service."

In the examination of candidates by the Indiana State Board of Medical Registration and Examination to practice medicine, held at Indianapolis July 14 to 16, 1903, the following questions on ophthalmology were asked:

1. How would you test acuteness of vision? 2. Give test for color blindness. 3. Define conjunctivitis neonatorum; give causes, symptoms and treatment. 4. Define iridectomy and state under what conditions you consider the operation necessary. 5. When should enucleation be performed? Describe operation.

A very appreciative notice of Dr. Gould's great work, Biographic Clinics, appears in the *British Medical Journal* of June 20. It occupies a page and a half, and closes with the following paragraph:

"Enough has, we think, been said to give an idea of the contents of this fascinating book. For fascinating it is, as much, perhaps, from the personality of the author, revealed in every sentence, as from the nature of its contents. But it must be read and studied in order to gain an adequate notion of the industry in the collection of 'documents,' the ingenuity in explanation, the subtlety and frequent cogency in argument, and the vigor of style which it displays. Whether the theory propounded therein be sound or not, the work is a

valuable contribution to medical literature. In these days of jejune treatises and compilations, which are as ashes in the mouth, a book like Dr. Gould's Biographic Clinics, which has the freshness, the brilliancy, and the rushing force of a mountain stream, is as welcome as summer —when it does come in this dreary climate."

The leading editorial of the May 9 number of the London *Lancet* was on the subject of "Opticians" and "Spectacle Prescribing." As a result of this editorial, the editor received two letters giving the optician's side of the subject. These letters are published in the *Lancet* of June 6. In the number of June 20, the editors close the discussion with the following note in answer to further letters from the opticians:

"The simple facts are that the eyes are organs in which mere faults of shape and alterations of function incidental to advancing life are frequently complicated by physiological defects and pathological changes of a serious character. The knowledge of the medical practitioner covers the whole range of the resulting phenomena; the knowledge of the optician at the very best covers only a small and comparatively unimportant portion of them. In these circumstances, the claim of the 'optician' to be a skilled adviser in matters pertaining to vision appears to us not only to be one which it is impossible to sustain, but one which cannot fail in a certain and perhaps considerable portion of cases to entail disaster upon those who are misled by it. The action of the prescribing optician is precisely on all fours with that of the prescribing druggist. If it be the pleasure of the public to be deceived, the public must suffer, and in the meanwhile we have discharged our duty by giving expression to the facts of the case."

Mind Blindness for Objects.—According to the Edinburg *Medical Journal* for March, Lepine (*Recueil d'Ophthalmologie,* Paris, 1902, tome vii) records a case which is interesting as being in a sense the converse of the word blindness. It was that of a man who had partial and transitory attacks of paralysis for some months. When Lepine saw him, there was no aphasia or amnesia, speech was perfect, and vision was also apparently quite good. It was not, however, quite normal, for, though he had no hemianopsia, he had some difficulty in "fixing" any object, and he could not read fluently at all. Objects which, in the course of his business (as a traveler for watches, etc.), had been very familiar to him, he recognized promptly and named correctly, but any other article, even of quite a common thing, he failed

to name or even to recognize; he could not imagine, for example, to what use a measuring tape could be put when it was shown to him. He could write to dictation and copy perfectly, but if asked to draw a common object, such as a tree, he merely wrote down the word "tree," without being able to make the slightest effort to sketch it; he seemed to have completely lost the visual memory of it. The picture of an object he appeared to recognize more readily than the actual object. When he looked at an article he recognized its outline, form, relief, color, etc., but remained entirely ignorant of its nature or use.

Sir Ernest Cassel's Gift for the Relief of Ophthalmia in Egypt.—Sir Ernest Cassel having given a large sum of money to the Egyptian Government for the relief of ophthalmia in Egypt, it has been decided to send traveling dispensaries into the country for the relief of those sufferers who are unable to attend the already existing hospitals. There will be at first one of these dispensaries or ambulance hospitals which will have a couple of tents with beds for operation cases and for the more serious treatment of cases. This will travel about from place to place under the direction of an ophthalmic surgeon, who will have under him an Egyptian assistant surgeon. If the experiment is successful, the number of dispensaries will be increased. Mr. A. F. MacCallan has been appointed by the Egyptian government to organize and to direct the enterprise, with the title of "inspector of traveling ophthalmic dispensaries in Egypt." Mr. MacCallan was formerly senior house surgeon at the Royal London Ophthalmic Hospital (Moorfields), and at the present time holds the post of chief clinical assistant at the hospital. He will leave for Egypt immediately, and has clearly the necessary qualifications to start the quaint experiment upon a sound basis. But what will be regarded as a sufficient measure of success to justify the making of further experiments, and who is to judge what is a success and what is a failure?—*The Lancet,* June 20, 1903.

The 10th International Congress of Ophthalmology will be held in Lucerne, Switzerland, September, 1904. Members of the Congress who propose to contribute a paper should send their manuscript before the 1st of May, 1904, to Professor Mellinger Bale. The paper must be written in one of the four official languages of the Congress, English, French, German, Italian, and the length must not exceed five pages of the size of the official report of the previous congresses.

The following subject will be discussed: *To Settle the Question of Indemnity as regards the Value of an Eye Lost or Injured.* Professor Axenfeld, Freiburg, Dr. Sulzer, Paris, and Dr. Würdemann, Milwaukee, will present a report on this subject. The Congress will last three days. The morning sessions will be devoted to discussion, and those in the afternoon to practical demonstrations. The president of the Swiss Confederation, M. Deucher, M. D., has accepted the position as honorary president of the Congress. The organizing committee consists of Professor Dufour, president; Professor Pflüger, vice-president; Professor Mellinger, secretary and treasurer; and Professor Snellen, president of last Congress. Any further information may be obtained by addressing Dr. Geo. E. de Schweinitz, 705 Walnut street, Philadelphia, or Dr. Coote, Quebec, Canada, who have been appointed correspondents for the United States and Canada respectively.

Martial on Alcohol and Eye Disease.—Dr. Deneffe, in *Janus* for December, calls attention to the retrobulbar neuritis often caused by the abuse of alcohol, and points out that even in Martial's time (A. D., 54 to 98) the dangerous effects of alcohol on the eyesight were known. In support of this assertion he refers to Martial's epigrams, vi, 78. As Martial is not quite so generally accessible as some of the other classics, we quote the epigram.

Pater nobilis, Aule, lumine uno
Luscus Phryx erat, alteroque lippus:
Huic Heros medicus: bibas caveto;
Vinum si biberis, nihil videbis.
Ridens Phryx, oculo, valebis inquit.
Misceri sibi protinus deunces,
Sed crebros jubet: exitum requiris?
Vinum Phryx, oculos bibit venenum.

which may be somewhat freely rendered as follows:

Phryx, good friend Aulus, of one eye had lost
The use, and in the other was dim sighted.
To him his doctor said, "Count well the cost
Of drinking; if you drink, your vision's blighted."
Phryx, smiling, bade his eye a mock farewell,
And ordered flagons deep, as quick as winking,
One after one. Shall I the sequel tell?
While Phryx the wine, the wine his sight, was drinking.

—K. W. M. in *New York Medical Journal,* June 13, 1903.

The second edition of the Graefe-Saemisch Text Book is being gradually published. The firm of Wilhelm Engelmann, of Leipzig, has already issued about fifty parts, the first fifteen of which have been briefly reviewed in these pages. Every ophthalmologist who reads German (and their number increases year by year) should subscribe for this valuable treatise—by far the most exhaustive of all the works on the eye and its diseases that have so far appeared in any language. It should form a part of every medical library, public or private, as the latest work of reference in ophthalmology. A glance at the titles and authors of the more recently published part (given in the order of their appearance) will convince the reader of the importance and value of this largest of the complete treatises.

Development of the Human Eye, by Prof. M. Nusbaum. Part 15.

The Cerebrospinal Relations of the Ocular Nerves, by Dr. St. Bernheimer. Parts 15 and 16.

Microscopical Anatomy of the Optic Nerve and Retina, by Prof. Greeff. Parts 17, 20, 21 and 22.

Microscopical Anatomy of the Lens and Zonula, by Prof. Oscar Schultze. Part 17.

The Defects and Congenital Anomalies of the Eye, by Prof. E. von Hippel. Parts 18 and 19.

Sympathetic Ophthalmia, by Prof. O. Schirmer. Parts 23, 24 and 25.

The Relation of General Diseases to Affections of the Ocular Apparatus, by Profs. A. Groenauw and W. Uhthoff. Parts 26, 27, 28, 32, 33, 34, 35, 36, 37, 38 and 40.

Microscopical Anatomy of the Eye, by Profs. Fr. Merkel and E. Kallius. Parts 29, 30 and 31.

Etiology and Pathological Anatomy of Paralysis of the Eye Muscles, by Prof. St. Bernheimer. Parts 39, 41, 42, 43, 44, 45, 46, 47.

Anomalies of Refraction and Accommodation, by Prof. Carl Hess. Parts 41 to 47 inclusive.

Operative Surgery of the Eye, by Prof. H. Snellen. Parts 48 and 49.

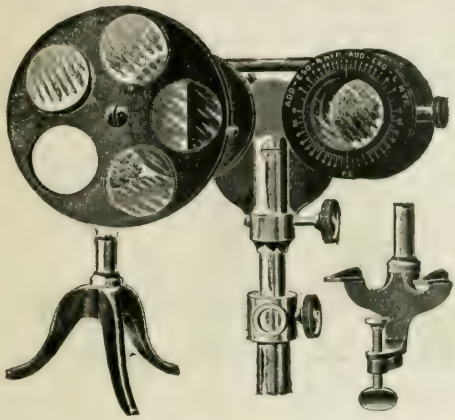
The Size of the Pupil as an Aid to Diagnosis.—Dr. J. T. Duncan gave this classification: a. Pupil may have pupils evenly contracted. This may indicate: (1) locomotor ataxia, (2) meningitis and encephalitis (early stages), (3) chronic inflammation, cervical cord. (4) apoplexy of pons, (5) epileptic fits (early), (6) uremia, (7)

tobacco amblyopia, (8) retinitis, (9) opium poisoning, (10) use of myotics. b. Pupils may be evenly dilated: (1) paralysis of both third nerves (post-diphtheritic), (2) intracranial tumors (late), (3) intracranial effusions, (4) irritation cervical sympathetic, (5) acute inflammation, cervical cord, (6) premonitory of locomotor ataxia, (7) after epileptic fits, (8) cataracts, (9) amaurosis, (10) acute mania or melancholia, (11) mydriatics. c. Pupils may be unequal, then we suspect: (1) locomotor ataxia, (2) general paralysis of insane, (3) unilateral lesion of third or sympathetic nerve, (4) pain in branch of fifth nerve, (5) old iritis, (6) carotid aneurism or tumor of neck, (7) use of a myotic or mydriatic in one eye, (8) unilateral cranial lesion, (9) acute glaucoma (unilateral). I. The pupils are contracted and fixed: In list a we exclude uremia, meningitis and encephalitis, retinitis, tobacco amblyopia. The remaining conditions can be differentially diagnosed. II. Pupils are evenly dilated and fixed: Rare. Present in (1) amaurosis, (2) use of mydriatics, (3) complete paralysis of both third nerves. III. Pupils are uneven but fixed: This usually points to locomotor ataxia or general paralysis of insane.—*Jour. A. M. A.*

For Testing Eye Muscles the Dr. Wilson

PHOROMETER

is Unexcelled



It includes all the known Tests. Tests quickly, Positively and Accurately

$40.00 Now made with Floor Standard **$40.00**

Send for Descriptive Circular.

E. KIRSTEIN SONS CO., Rochester, N. Y.

W. A. FISHER, M. D., Pre A. G. WIPPERN, M. D., Vice-Pres.

Chicago Eye, Ear, Nose and Throat College,

206 EAST WASHINGTON STREET, CHICAGO, ILL.

A Post Graduate School for Practitioners of Medicine

Located in its own building two blocks from Court-house. Large hospital in building for Eye and Ear cases only. Hospital charges, including board, medicine and nursing, $10.00 a week and up. This does not include Surgeon's charges for professional services. Abundant clinical material. Courses one month. Enter any time. Teaching clinical.

Free Beds are provided for charity cases; to which appointments are made through the Profession only.

Write for catalogue and information to

J. R. HOFFMAN, M. D., Sec'y.

Why is the Shur-on Eyeglass Popular?

Because of Its Exclusive Elegance, Practical Advantages and Modern Construction

as well as being the only satisfactory substitute for the spectacle.

Made in Gold and Gold Filled

Send us your card and we will tell you the address of your nearest jobber.

E. KIRSTEIN SONS CO.

COURT STREET ROCHESTER, NEW YORK

The Optical Journal

has bought **The Focus**

and is now the only exclusive optical trade paper in the United States.

Enlarged to 150 pages. Price, $2.00 a year; twenty cents a copy.

If you don't get the Optical Journal you don't get the optical news.

Send for a copy.

FREDERICK BOGER PUB. CO.
36 Maiden Lane,
New York.

POLK'S MEDICAL REGISTER AND DIRECTORY

WAS ESTABLISHED IN 1886.

Do Not Be Deceived By Imitators.

See that the name R. L. POLK & CO.

IS ON THE ORDER BEFORE YOU SIGN IT.

POLK'S is the only complete Medical Directory.
POLK'S is the only Medical Directory having an index to all physicians in the United States.
POLK'S has stood the crucial test of time with increasing popularity. It thoroughly covers the field.

R. L. POLK & CO., Publishers,
DETROIT, MICHIGAN.

SUBSCRIBE NOW.

THE PEERLESS EYE GLASS

Its **BEAUTY, SIMPLICITY** and **POPULARITY** speak for it.

Made of one piece, **INTEGRAL.**

No stud screw.

Nothing to lock.

Nothing to loosen.

Made to last.

Antiseptic.

Native metal guard.

No cork to soil.

No shell to irritate.

GUARANTEED AGAINST BREAKAGE

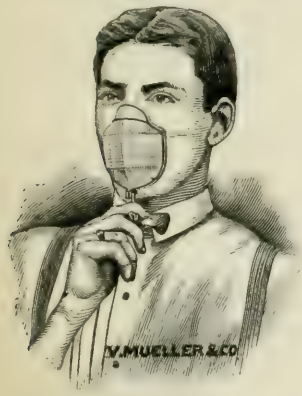
J. M. & A. C. JOHNSTON CO.

MANUFACTURING OPTICIANS

84 Wabash Avenue, CHICAGO

We have perfected machinery for grinding **TORIC LENSES,** and invite the readers of the Record to give them a trial.

Send for our new Catalogue—just out, and also book of prescription blanks.



V. Meuller & Co.

...MAKERS OF...

..Surgical Instruments..

Eye, Ear, Nose and Throat Instruments A Specialty.

264-266 OGDEN AVENUE, CHICAGO.

We make **DR. P. A. JORDAN'S** new Chloroform Inhaler specially designed for eye work. It affords a large clean field for operation about the eye, adheres to face without holding, better than ordinary Inhaler; is applicable to anaesthetic for any kind of operation as well as on the eye, and may be used for giving ether.

We make our own eye cutting instruments; send us some of your Eye Knives to sharpen and test our work.

Price of Mask = 85 Cents.

When writing please mention the Ophthalmic Record.

GOLD AND SILVER MEDALS AWARDED AT THE PAN-AMERICAN EXPOSITION

Improved Holmgren
Test for Color Blindness

Standard set of colors selected by the committee appointed by the American Ophthalmological Society to adopt standards and methods for the examination of employes of the

Railroad & Marine Service

A metallic tag for convenience in recording tests is attached to each skein.

Price, $3.50 **Full directions accompany each set.**

E. B. Meyrowitz **Optician**

MAKER OF
High-Grade Eye, Ear and Throat Instruments

125 West 42d St., New York
650 Madison Ave., New York
604 Nicollet Ave., Minneapolis
360 St. Peter St., St. Paul
3 Rue Scribe, Paris, France

Trial Cases, Ophthalmometers, Perimeters, Stevens' Clinoscope, Phorometer and Tropometer, Electro-Medical and X Ray Apparatus.

104 East 23d St., NEW YORK

Volkmann Eye Magnet

UNSURPASSED IN POWER

MINIMUM WEIGHT

EASE OF MANIPULATION

VERTICAL AND HORIZONTAL SUSPENSION

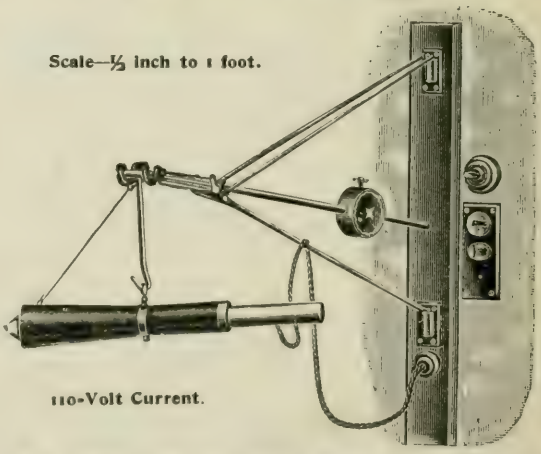
For particulars apply to

GEORG BECK

SOLE MANUFACTURER

Rummelsburg-Berlin **Germany**

—OR TO—



E. B. Meyrowitz **Sole Agent for the United States and Canada**

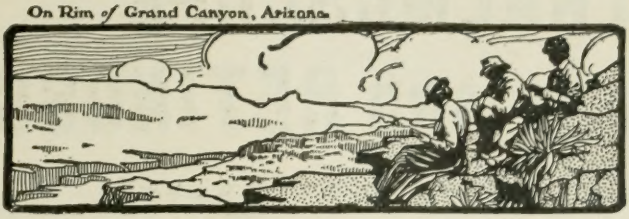
Maker of Ophthalmological Apparatus, Standard Electro-Therapeutic Equipment, X-Ray Apparatus, and High Grade Eye, Ear, Nose and Throat Instruments.

104 East 23d Street, New York

MINNEAPOLIS PARIS ST. PAUL

A Mile-Deep Chasm

On Rim of Grand Canyon, Arizona.



Have you seen Earth's greatest wonder?

The Grand Canyon of Arizona

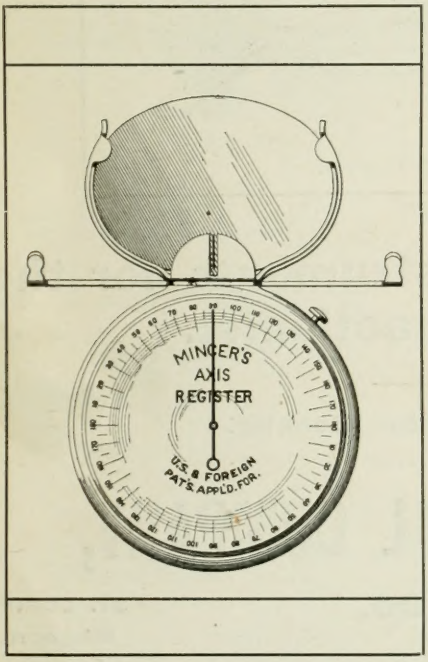
President Roosevelt says: "Every American should see it."

If you can not visit it now, send 50 cents for the season's novelty, a beautiful colored view of the Grand Canyon, uniquely mounted to reproduce marvelous atmospheric tints. Or for same price, a Grand Canyon book of 128 pages; articles by noted persons; artistic illustrations and cover. Worthy a place in your library.

For full particulars, address

Gen. Pass. Office, Atchison, Topeka & Santa Fe Railway, Chicago.

Santa Fe All the Way



SOMETHING NEW!

The Mincer Instantaneous Axis Register

A TIME-SAVING DEVICE

It will register the AXIS of a cylindrical lens instantly and with absolute accuracy. No oculist should be without one. Order now. Ready for delivery September 25th.

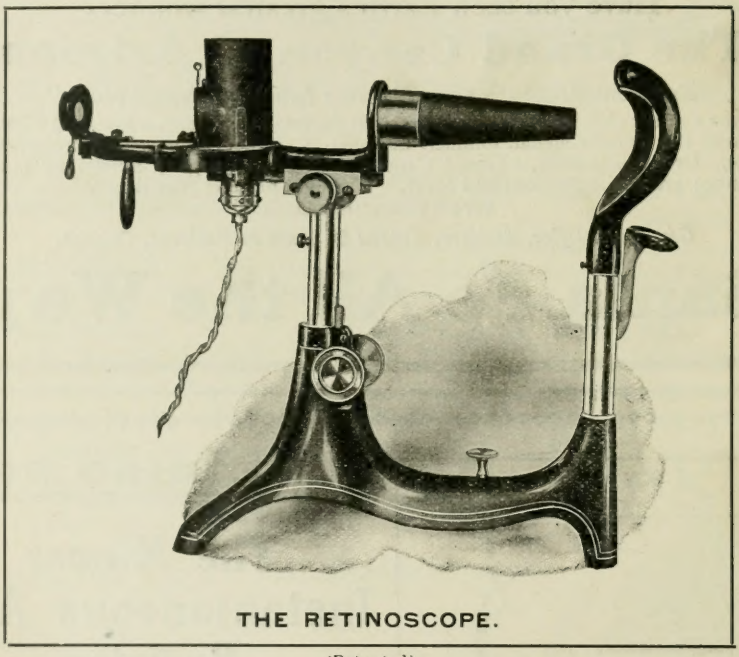
PRICE, $3.50

MANUFACTURED BY

L. L. MINCER

Rochester, N. Y.

GENEVA
OPHTHALMOSCOPE AND RETINOSCOPE
Combined.



THE RETINOSCOPE.

(Patented)

A Model Pair of Instruments for the Modern Refractionist.

Send for Illustrated Booklet.

GENEVA OPTICAL COMPANY,

DES MOINES, Iowa.

CHICAGO, Illinois.

ST. LOUIS, Missouri.

....THE....

POST-GRADUATE MEDICAL SCHOOL

OF CHICAGO

W. FRANKLIN COLEMAN, M. D., Prest.
W. L. BAUM, M. D., Treas.

A. H. FERGUSON, M. D., Vice-Prest.
A. R. ELLIOTT, M. D.

Is now located in its new building,

2400 Dearborn Street.

A school for practitioners of Medicine and Surgery.

Teaching exclusively Clinical.

Abundance of material.

Large hospital in School Building.

Send for latest Bulletin of information to

FRANKLIN H. MARTIN, M. D., Sec'y.
2400 Dearborn St.

Annals of Ophthalmology

The largest illustrated Quarterly Eye Journal published. Each issue over 200 pages of original matter and properly drawn up abstracts of recent Domestic and Foreign Ophthalmic Literature.

Subscription Price, $5.00 per Annum.

Annals of Otology, Rhinology and Laryngology

Each issue over 200 pages original matter and properly drawn abstracts of recent Domestic and Foreign Literature.

BOTH JOURNALS, $7.00.

Subscription Price, $4.00 per Annum.

We will furnish the Annals of Ophthalmology and the Ophthalmic Record for $7 per annum; the Annals of Otology, Rhinology and Laryngology and the Ophthalmic Record for $7; the Annals of Ophthalmology and the Annals of Otology, Rhinology and Laryngology and the Ophthalmic Record for $10, in advance, to new subscribers.

ADDRESS: JONES H. PARKER, PUBLISHER,

Laclede Building, ST. LOUIS, MO.

When writing please mention the Ophthalmic Record.

The C., I. & Co.

SELF-LUMINOUS OPHTHALMOSCOPE

IN presenting to the profession our New Self-Luminous Ophthalmoscope, we do so confidently, believing that it will only be necessary for you to try it once to become its enthusiastic advocate, as the retina simply becomes an open book when it is used, and if you can read this open book your diagnosis will be absolute.

We would enumerate its many special features as follows:

Has wide and brilliant field.

Mydriatic not necessary unless pupil is unusually contracted.

The intensity of light can be controlled.

Your light is always in position.

The field is easy to locate.

Can be used very close to patient's eye.

Is free from reflections and glare.

Can be used in any position, or while your patient is in reclining posture.

Is always ready.

Can be used outside of Darkroom.

No hinge or joint to permit displacement of light.

A complete Ophthalmoscope containing nineteen lenses in compact and perfect form.

Neat, handsome and well finished.

Put up in a silk-lined morocco case of proper form and size.

Is provided with battery with rheostat.

If your office is provided with current controller, battery is unnecessary.

CUTS HEREON TWO-THIRDS THE ACTUAL SIZE

PRICE COMPLETE, INCLUDING BATTERY, $15.00 NET CASH
PRICE, WITHOUT BATTERY, $12.00 NET CASH

Sold by all Jobbers and

CHAMBERS, INSKEEP & CO.

MANUFACTURERS

Optical Goods & Eye, Ear, Nose & Throat Surgical Instruments.

88 AND 90 WABASH AVENUE, CHICAGO, ILL.

When writing please mention the Ophthalmic Record.